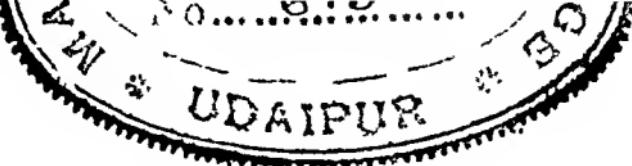


THE NEW PAST

AND OTHER

ESSAYS ON THE DEVELOPMENT OF CIVILISATION



PREFATORY NOTE

THIS book is the outcome of a Conference, held at Aberystwyth University in April, 1924, which had for its main purpose a series of lectures and discussions on the "Development of Civilisation." The Council of the Training College Association availed themselves of the offer of the Board of Education to co-operate in arranging the lectures, and the Conference was attended by Principals and Tutors of Training Colleges.

The President of the Conference was Professor Bompas Smith of the University of Manchester. The Board of Education was represented by Mr. E. H. Carter, H.M.I.

This volume is now issued in the hope that it may appeal to that ever-increasing number of students and general readers who take an interest in the application of modern discoveries and modern thought to the interpretation of human history, certain aspects of which are here discussed.

The Editor is much indebted to Miss K. B. Anderson, Secretary of the Training College Association, for valuable assistance in arranging the lectures and papers for publication.

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THE NEW PAST
AND OTHER
ESSAYS ON THE DEVELOPMENT
OF CIVILISATION

I

THE NEW PAST

BY JAMES HENRY BREASTED, PH.D., LL.D.

(Professor of Egyptology and Oriental History in the University of Chicago)

THERE are spots in Europe to-day where chance has brought strangely near together and left lying side by side the relics of the earliest prehistoric savages and the evidences of so-called modern civilisation—the earliest and latest points in the traceable human career. The soil of the battle-scarred hills overlooking the River Somme in Northern France is thickly sown with fragments of steel shells which have penetrated deeply into the slopes and natural terraces made by the river ages ago.

To-day, when the great guns are silent, a few minutes' work with a shovel will uncover, lying together in the gravels along the brow of the valley, the flint fist hatchet, the earliest surviving weapon of man, and the jagged fragments of the modern explosive steel shell. There they lie, as you unearth them, side by side, the flint fist hatchet and the steel shell fragment, and the

whole sweep of human history lies between them—a story of at least several hundred thousand years of human endeavour leading us age by age from one to the other.

Although not a few English historians still follow Seeley, his definition of history as "past politics" has been quite truthfully characterised by Frederic Harrison's remark that it leaves out nine-tenths of the facts necessary to understand the past—that is, nine-tenths of the essential content of history. To no small extent history is a story of the conquest of material resources by means of highly varied devices, tools, machinery, and implements, if we include also in these things the consequences, industrial, social, political, artistic, and religious, which resulted from their introduction. The steam or gasoline cylinder is as truly the symbol of the present age as the stone fist hatchet is the sign manual of the Stone Age life fifty thousand years ago.

The recovery of the past in this larger sense is demanding a new type of historian—a cosmopolitan student of man, who is alike anthropologist, archæologist, ethnologist, comparative religionist, versed in art and literature and acquainted both with the classical and the leading Oriental languages of antiquity. With this equipment he must combine a magnanimous readiness to consider the disquieting possibility that civilisation appeared in the eastern Mediterranean long before the Greeks themselves ever lived there, and he must cultivate a becoming fortitude of spirit to face with equanimity even the disclosure, so horrifying to some classicists among us, that the most sacred shrines of Greek culture were profaned by many foreign influences which furnished the primitive barbarism of the archaic

Greeks with all the ordinary material processes of civilised life, and restored civilisation in Europe after the barbarian invasions of the earliest Greeks had destroyed it, root and branch. Notwithstanding the laborious years necessary to produce a historian with an equipment like this, men of this type are already at work, and their devoted labours are now recovering the impressive story of that age-long process by which the primitive forest of the Stone Age hunter has given way to the modern forest of factory chimneys.

The imposing task of recovering the story of the human past has, however, hardly more than begun. It is a little over two generations ago that Boucher de Perthes, the pioneer investigator in *prehistoric archaeology*, discovered lying together in the high glacial gravels of Northern France along the River Somme the stone fist hatchet of the earliest European savage, together with the bones of colossal and long extinct mammals, which de Perthes declared to be contemporary with the fist hatchet. It is less than two generations ago that the English scientists Huxley, Prestwich, Sir Charles Lyell, and others visited the Somme Valley and substantiated the facts observed by Boucher de Perthes. As a result of this visit Lyell published his epoch-making volume on the *Antiquity of Man*, which appeared in the sixties of last century.

We are all familiar with Huxley's controversy with the Anglican bishops which followed this final recognition of the enormous age of man, for some of us read the debate in our younger days in the current magazines.

The revelation of thousands of years of *Oriental history*, lying back of anything before known of the Ancient East, is equally recent. Rollin's *Ancient History*, in

English translation, though its author had little more than Herodotus and the Old Testament as sources for the history of the Ancient East, is still offered for sale in the windows of our bookshops; and in my boyhood it still was widely read. My father's copy of Layard's *Nineveh and Babylon*, with its mysterious winged and human-headed bulls on the cover, the marvel of my boyhood, went into his library, as shown by the date on the flyleaf, in 1869, while the title-page is dated 1859. It is only a few years earlier that the decipherment of Babylonian and Assyrian cuneiform was achieved, and the first inscriptions in Egyptian hieroglyphic were read only a quarter of a century earlier. Our knowledge of these languages and these systems of writing is still far from complete and is making daily progress.

Thus with startling suddenness, and practically in our own time, the curtain has been drawn aside, permitting us to look back into the deeps of a past so appallingly remote that neither thought nor education has yet become adjusted to it. Let us for a moment look back into this imposing vista of human development, disclosed to us by the investigation of prehistoric man in Europe on the one hand, and of the once lost civilisations in the Orient on the other.

Almost everyone is aware that we can trace now the forward movement of earliest man in Europe through many thousands of years of struggle with the material world. The great polar ice cap descending on the north side of the Mediterranean for the fourth time, driving the European savages of the Early Stone Age southward and then slowly retreating northward again, has become for us a vast geological clock, the fourfold rhythmic swing of whose colossal ice pendulum

to the south-eastern corner of the midland sea, a fertile and sheltered corridor teeming with luxuriant vegetable and animal life from inner Africa, and offering to the Late Stone Age hunters a home of inexhaustible resources in a situation of unexampled safety and protection from hostile intruders.

Into this paradise of the lower Nile Valley, which we now call Egypt, the Stone Age hunters of the North African plateau had inevitably been lured by the chase from the beginning. I have found their Nile boats carved on the rocks far out in the wastes of the Nubian Sahara behind Abu Simbel. Elsewhere in the whole Mediterranean world there was no situation where the hunting life would be so stimulated to advance to the higher stage as it was along the Nile. Europe, meanwhile, had seemingly been retarded by the rigours of an Ice Age climate; while, on the other hand, long before 5000 B.C., the favoured hunters of the Nile jungle had advanced far beyond their European contemporaries in the great prehistoric world around the Mediterranean. To-day we excavate along the margin of the Egyptian alluvium on the edge of the desert the graves of the oldest known cemeteries in the world, and find lying in these graves the descendants of the Nile hunters of the Stone Age, just beginning the transition to metal. They had already acquired all the leading domestic animals, and, having domesticated likewise the wild cereal grasses, had made the transition to the settled agricultural life. All the evidence would now indicate that these prehistoric Egyptians of the earliest cemeteries, or their ancestors, were the earliest men on earth who were able to insure themselves an uninterrupted food supply by the domestication of the wild sources,

vegetable and animal, while their subsequent conquest of metal and their development of the earliest known system of phonetic writing gave them the leadership in the long advance to civilisation when all the rest of the world still lagged behind in Stone Age barbarism.

Upon these great conquests, chiefly in the material world, followed an impressive development, social, governmental, and religious. This jungle valley lying athwart the eastern Sahara had gathered between its contracted rocky walls the prehistoric hunters scattered along the North African coast, and held them together in the possession of all the resources necessary for the unhampered development of human life under conditions so favourable that they were slowly consolidated into the first great society of several million souls, swayed by one sovereign hand, and in possession of the leading fundamentals of civilisation. Thus, in the centuries between 5000 and 3000 B.C. arose the first great civilised state at a time when the Mediterranean elsewhere was still fringed with scattered communities of Stone Age hunters.

The prehistoric hunter, whose self-expression was quite content to ply the flint graving tool in carving symmetrical lines of game beasts along the ivory handle of a stone dagger, was thus transformed by fifty generations of social evolution into a royal architect launching great bodies of organised craftsmen upon the quarried Nile cliffs, and summoning thence stately and rhythmic colonnades, imposing temples, and a vast rampart of pyramids—the greatest tombs ever erected by the hand of man. Such outward, often purely material, expressions of advancing social governmental organisation, with which man's unfolding inner life has kept even

pace, furnish the unwritten evidence by which the new historian must trace the successive transitions which have lifted man from savagery to civilisation ; and it is the study of such human documents which has revealed to us the outlines of the marvellous story as we now possess it.

Now why are these developments, in the life of an age so remote and a land so distant, of any consequence to us of the modern world ? The descendants of the first settlers in the British colonies of America are specially fitted to visualise and to understand the wonderful transformation of a wilderness into a land of splendid cities. But the fathers, whose efforts have planted great and prosperous cities along the once lonely trails of that broad land, received art and architecture, industry and commerce, social and governmental traditions, as an inheritance from earlier times. There was an age, however, when the transition from barbarism to civilisation, with all its impressive outward manifestations in art and architecture, had to be made *for the first time*. The significance of the appearance of civilisation along the Nile does not lie in the splendour of its buildings, but in the fact that it was rising *for the first time on earth*.

To-day the traveller on the Nile enters a wonderland at whose gates rise the colossal pyramids of which he has had visions from earliest childhood. As he ascends the river he sees expanding behind palm-fringed shores vast temple precincts, to which avenues of sphinxes lead up from the shore, dominated by the mighty shafts of tall obelisks and stately colonnades. But it does not occur to the traveller that, just as in America, so there on the Nile, the wilderness preceded all this.

Where those vast monuments of stone now rise once stretched the tangled jungle of the Nile canyon, pathless for thousands of years save where the hunter's narrow trail led through the reeds to the water's edge. Rarely does the modern pilgrim in Egypt realise that there was no civilised ancestry from which the prehistoric Nile-dwellers might receive an inheritance of culture. In their own deepening experience and broadening vision we must find the magic which transformed these primitive hunters and their little settlements of wattle huts into a great society dominated by masterful men of grandly spacious imagination, of imposing monumental vision, whose prodigal hands, at first untrammelled by tradition, stretched out over the one-time jungle, scattered these gigantic monuments far up and down the river. He who knows the story of the transition from the prehistoric hunters of the Nile jungle to the sovereigns and statesmen, the architects, engineers, and craftsmen of a great organised society, which wrought these monumental wonders along the Nile at a time when all Europe was still living in Stone Age barbarism and there was none to teach a civilisation of the past—he who knows all this knows the story of *the first rise of civilisation anywhere on the globe*.

Civilisation was thus born at the south-east corner of the Mediterranean. The Stone Age villagers on the northern coasts of the same sea—that is, in Southern Europe—looked wonderingly out upon the earliest sea-going craft ever equipped with sails from the mouths of the Nile, and bringing the works of civilised man for the first time to the shores of Europe, precisely as the West Indian natives later marvelled at seeing the first ships of Europe approaching the shores of America.

For just as European civilisation was brought across the Atlantic to the savages of the Western world, so Oriental civilisation crossed the Mediterranean to the barbarians of Europe. In view of his remarkable discoveries in Crete, the south-eastern outpost of Europe, where it approaches most nearly to Egypt, Sir Arthur Evans states with evident conviction, "Ancient Egypt itself can no longer be regarded as something apart from general human history."

While this is true—and it is an undoubted fact that Egypt's position on the Mediterranean gave it easier access to Europe than was possible in the case of Babylonia, separated as it was from the Mediterranean by hundreds of miles of desert—nevertheless we must not forget that somewhat later than in Egypt there arose in Babylonia a remarkable civilisation, characterised by persistent progress in practical, legal, and commercial matters, and at the same time so devoted to the belief that human destiny might be read in the stars that its extraordinary skill in the study of the celestial bodies furnished the data which became in the hands of the Greeks the foundations of the science of astronomy. The line of communication between the Babylonians and Europe lay through Asia Minor, as that of Egypt led across the Mediterranean. At the same time the interfusion of civilisations in the Near Orient led to the creation of what we may call an Egypt-Babylonian or Near-Oriental culture nucleus. It lay behind Europe from our point of view, and from it, especially later from the harbours of Phœnicia, came the culture forces which set European civilisation going. Not only so, but a current of Oriental forces, of which Christianity is the most noticeable, continuing to set

toward Europe, eventually transformed the Roman state at Constantinople into an Oriental despotism, and continued to be felt long after the Crusades.

The recognition that the earliest centre of civilisation in the Eastern Hemisphere was in the eastern Mediterranean region, whence it was diffused in all directions, especially toward Europe, makes possible a great generalisation regarding the developing life of man on earth, which, I think, has remained unnoticed. It is now evident that there are only two regions on the globe in which man has risen from Stone Age savagery to the possession of agriculture, metals, and writing, the indispensable fundamentals of civilisation. The complete independence of these two regions in making these cultural conquests is evident. They are geographically widely separated. One of them is in the New World and the other in the Old, and each of them lies along or on both sides of a great intercontinental bridge, one joining the two Americas, the other connecting Africa and Eurasia. In both the Old World and the New the bridge between the continents formed the centre around which took place the development and diffusion of the highest civilisation at first attained in either hemisphere.

We speak with reason of the Old World and the New; for the development in the Eastern Hemisphere was six thousand years earlier than in the Western. The European conquest of the Americas found the aborigines of the central region just beginning the use of metal, employing picture-writing about to become phonetic, in full possession of agriculture and irrigation, but still without domestic animals. That is, Columbus found the aboriginal Americans at a level of culture

already attained by the Near Orient well back of 4000 B.C.

Considerations like these disclose at once an impressive degree of unity in the career of man. The recognition of the Orient as lying behind the history of Europe, just as the history of Europe lies behind that of America, and the further possibility of pushing back behind the historic Orient to the ages of man's prehistoric development and linking these up in their turn with the history of the Orient, thus giving us the ever remoter stages, America, Europe, and the Near Orient, prehistoric man, the geological ages—these latter reconstructions of the new historian disclose to us the career of man for the first time as one whole, to be regarded as a consecutive development from the stone fist hatchet to the shell fragments of 1914 buried side by side on the battlefields of the Somme. A comprehensive study of the ancient Orient, carried on with open eyes and with larger objects in view than the statistics of the dative case, reveals to us the well-known and long familiar historic epochs of the career of European man for the first time set in a background of several hundred thousand years. In this vast synthesis, which only a study of Oriental history makes possible, there is thus disclosed to us an imposing panorama of the human career in a vista of successive ages such as no earlier generation has ever been able to survey. *This is the New Past.*

However it may be with science and philosophy, history has thus far made little account of this tremendous synthesis. And this brings up the important question why modern education and research should be expected to take account of the New Past—these ages

face—in all these and in an infinite number of other commonplaces of life—things without which modern life could not go on for a single hour—the average man of to-day is using items of an inheritance which began to pass across the eastern Mediterranean from the Orient when Europe was discovered by civilisation five thousand years ago. Even in the world of science it is found, for example, that in the modern study of the moon the observations of the Babylonians, furnishing the earliest known data, are of great value. Similarly the processes of smelting metallic ores devised by the Egyptians some six thousand years ago, when they became the first smelters of metal, have been employed with little change ever since, until in quite recent years modern chemistry has introduced improvements and changes.

It is, however, quite possible to misunderstand the value of ancient achievement. One of the commonest and most regrettable spectacles of modern life, especially in England and America, is that of enraptured femininity contemplating the lofty truths fondly believed to be enshrined in some ancient Oriental faith, and forgetting all that ages of social experience have contributed in developing and enriching all the surviving religions of ancient origin. To ignore these later centuries of ennobling development and, turning backward, to adopt without change the germinal stages of some ancient faith is as reasonable as it would be for the thirsty individual seeking refreshment on a hot day to go and lie down under an acorn and regale himself on a water-melon seed!

Is there, then, any value that may still come to us from the New Past other than the intrinsic worth of its

surviving achievements, which are still in common use among us? Lord Acton has well said that, "next to the discovery of the New World, the recovery of the ancient world is the second landmark that divides us from the Middle Ages, and marks the transition to modern life." In this distinguished historian's judgment, therefore, the two great forces which led men out of the Middle Ages into modern life were a vision which looked both forward and backward, and which not only caught the limitless possibilities of the future in the New World after 1492, but also drew the profoundest inspiration from the newly recovered past, as they learned to know it in the surviving writings and other important works of its greatest men.

What was the ancient world, the past, to which Lord Acton refers? The only past known to the men who were emerging from the Middle Ages was, as we all know, the past of Greece and Rome. Now we have just been considering the fact that the process of recovering the ancient world which began at the dawn of the Renaissance did not cease with the Renaissance, but has gone on through all the centuries since then, and with quickening strides, especially during the last two generations. We listen now not only to the voices of Cicero and Socrates, of Isaiah and David, as did the men of the Renaissance, but also to the voice of Sennacherib in the proud story of his victories, to the voice of Cheops telling in terms of colossal masonry architecture the triumphs of the first great organized state, to the voice of the earliest smelter of metals singing in the tinkle of his primitive anvil the song of man's coming conquest of the earth, to the voice of remote and long-forgotten æons heard

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now only in the message of ever more carefully wrought stone implements, to the voice of geological ages muttering in the savage gutturals of incipient human speech, which we seem to hear resounding through prehistoric forests, re-echoing to the first inarticulate utterances of those now hardly discernible creatures about to become men. Back through the æons into historic and prehistoric deeps like these we now look, and listen to the echoes that come to us out of the vista of the ages.

It was with such a vision before him that Tennyson looked down into the cradle of his firstborn and said, "Out of the deeps, my child"; and such a vision of the New Past, just beginning to dawn upon the minds of modern men, has values as yet all unproved. He who really discerns it has begun to read the glorious *Odyssey* of human kind, disclosing to us man pushing out upon the ocean of time to make conquest of treasure unspeakable, of worlds surpassing all his dreams—the supreme adventure of the ages.

II

SOME ORIGINS OF CIVILISATION

A SHORT SUMMARY

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WITHOUT entering into details concerning human origins, one may assume widespread agreement as to certain changes occurring at the threshold of humanisation. These changes include a lengthening of the period of gestation and an increased helplessness of the newly born, facts doubtless related in some way to the increase of size of skull and brain, which in turn is related to a decrease of the snout. The latter, again, is related to the assumption of bipedal locomotion and the adoption of stereoscopic vision, with freer movements of head and neck. It is evident that, whatever view is taken of rostro-carinates and eoliths, the use of stone (and probably also wood) for implements goes back to the very early days of man, and that, very early, he knew of fire. The question as to the stage at which he began to include flesh in his diet depends on the further question whether the Neanderthal type was flesh-eating. The majority of students think Neanderthal man did eat flesh.

The adoption of flesh-hunting by man seems to have been accompanied, or quickly followed, by increased differentiation of work between the sexes.

The men hunted, the women gathered food and tended babies. Among most mammals the sexes hunt together and run together. The possibility of breeding more or less all the year round seems to be another early human acquisition.

The above incomplete list tells us the distinctly human level from which our rapid survey may start. The flint implements from the earlier Palæolithic periods are of comparatively few types (picks and ovate scrapers for the most part); most tools are closely faithful to type, and there seems to be a gradual advance to neater percussion-chipping, producing more regular edges. Most scholars are agreed as to the immense duration of this earlier period, and as to the remarkable quality of the finest workmanship in implement-making at this stage. But there is as yet little evidence of free inventive initiative.

The implements of the earlier Palæolithic period (Pre-Chellean, Chellean, and Acheulean) are, largely, shaped cores, though, towards the end, the flakes chipped off are sometimes further chipped to make tools (Levallois flakes).

In the middle Palæolithic period (Mousterian) we have what seems to be a chapter apart in the story of human life in Europe. This period witnessed an advance of ice sheets (the fourth of the series of advances inferred by Penck, or the third if we accept the newer view that the first and second—that is, the Gunz and the Mindel—are phases of one and the same advance), known to glaciologists as the Würm advance. It brought in a special race known as that of Neanderthal, a race probably not very closely related to the men of later times, though on this point a few re-

searchers hold the contrary view. In this period flint flakes, far more often than cores, were shaped into weapons. From this period, too, we have indications of definite burial (*La Chapelle aux Saints*), giving us ground to think that these men were beginning to reflect on the subject of death.

With the retreat of the Würm Ice Sheet the climate improved a little, and a great deal of Europe probably became a cold grassland. Skeletons indicate resemblances to modern man, and fashions in tools, etc., undergo changes. This period of change is generally taken as the beginning of the Upper Palæolithic Age, and that age has been elaborately subdivided by the French archæologists. It is, broadly speaking, the Age of Cave-Man, and is probably far shorter than the Lower and Middle Palæolithic periods. Without attempting a detailed survey, we note several contrasts between it and preceding phases. Both cores and flakes of flint and chert are made into tools, which are often very numerous, suggesting easier replacement, and with this goes less elaborate care in shaping the single tool. The tools assume various shapes for various purposes, and there seems evidence of considerable evolution in the form of points, etc., as well as of differences between the fashions followed in different places. Wood, bone, and horn come into wider use, and this may partly account for the roughness of a lot of the flint work, though the Solutrean stations of Central Europe and Eastern France show flint-flaking of the most elaborate type; this fine flaking was done largely by pressure and less by percussion. In the latter part of this age, bone and horn needles occur, and indicate finer work on skins (clothing, shelter, etc.).

Ceremonial burials are the rule, and apparently at least one case (Aurignac) of a social burial is fairly clear. From some burials we infer that personal ornament was used. There is an outburst of art, including human statuettes which in their forms show reflection on the facts of fertility and the linking of the generations. This seems to be followed by the art of engraving and drawing, often with colour, on walls of caves, on weapons, on pieces of bone and horn, and so on. The vivid products of this work are now well known through their reproduction in many illustrated books. Some more or less geometrical drawings are known from Spain and from the Font de Gaume (Dordogne), and are said by some to be the representation of wooden dwellings, or tents, or traps, but this is very uncertain.

In Eastern Spain there are rock decorations which Breuil considers Upper Palæolithic, but which may be more recent. Some, like that of the dance of the women, suggest ceremonial, others are hunting scenes in which the men may be armed with bows and arrows, weapons unknown to the Upper Palæolithic peoples farther north. The women are mostly clothed and have wasp waists, and this also has suggested to some students that the decoration is of later date.

Comparing this period broadly with the preceding ones, we note the clear evidence of growth of initiative and of variability, of reflection, of social life, of more freedom and power of fancy, of the expression of observation, of greater resources and more continuity. Physical anthropology suggests that most European people of this period walked erect, and had large brains, usually in skulls which were either very, or moderately,

long. Elliot Smith has made the important point that their powers of speech were obviously much greater than those of Mousterian men in Europe. They show considerable diversity of physical type, and suggest the beginnings of some modern stocks of mankind. The student cannot but make surmises as to the possibility of differentiation of function in their communities, and many details suggest increase of opportunities of maternal care. These ancient schemes of life are obviously related to flint and chert supplies, and those supplies are largely found on and near the greater plains, often in association with chalk surfaces, which, from their nature, were always relatively clear of dense forest.

The Sahara seems to have included much grassland on which ran herds of ostriches and other beasts, for the zone of the wet westerlies of the Atlantic lay much farther south than now, so long as the ice sheets of the north-west and the Alps remained extensive. The Sahara thus probably had some winter rain at least and was inhabited by man, as we know from finds of flint implements and bored ostrich eggs, etc. It probably continued to be inhabited in Neolithic times.

When the last great retreat of the ice was progressing, the climatic zones shifted northward in Europe to their present positions, Western and Central Europe now receiving rain from the westerlies and developing the summer-green forest of which shreds and patches persist to this day. Subsequent changes of climate have been comparatively small, though they may have had important bearings on human affairs if the interesting inferences of Brooks (*Evolution of Climate*) are fairly correct. The change of climate and environment, and diminution of the big beasts of the older time, the

need for new devices, evidently brought about a great human crisis. Indeed, the situation was so serious that the older archæologists believed a great hiatus to exist between the Old Stone Age and the New. Evidence, chiefly from France, points to at least partial continuity, but it still needs a great deal of sifting, and an introductory lecture must not go into the details of this very involved problem. For the moment we may tentatively picture the men of the Old Stone Age in Western Europe struggling to meet the new problems by old devices. We may think of life connected with the kitchen middens of various Western shores, with, also, several workshop floors strewn with small flints as in part survivals and adaptations of old times and old ways. An industry characterised by tiny flints of styles belonging to the Upper Palæolithic, and apparently most developed in the period soon after the ice sheets finally retreated, is found in the British Isles, Southwest and West Europe, North Africa, as well as in South India, Ceylon, and elsewhere. In the crisis it appears that flint technique decayed in Europe; interest in bone and horn had started this decline long before. The hunt was probably less remunerative and ivory difficult to come by, and bone and horn work was not generally maintained at old levels.

Meanwhile other changes were occurring elsewhere. The northward shift of climatic belts began to dry the Sahara, and pressed its people out in many directions, and we get suggestions of migrations northward to West Europe, and very probably of pressure of population on the Nile. Here the old technique of flint work seems to have persisted and developed, with specially fine pressure-flaking. Probably the concentration of

people on the Nile was a serious factor in promoting irrigation and food production. At about this period it would seem that the Persian Gulf was diminishing, and thus opening up new sites for man step by step—a process that went on for a long time.

Again, the reduction of the ice sheets opened up the mountain valleys of South-east Europe and the Alps, though they doubtless acquired large amounts of forest.

It is fairly generally believed that somewhere in or near the mountain zone between the Alps and the eastern shores of the Persian Gulf men had been undergoing an education of a type different from that suggested above, and Myres, in his introduction to the *Cambridge Ancient History*, gives a very suggestive sketch of this. The association with the mountain zone of the type of development now to be described is at present, however, only a useful hypothesis. In that zone flint was scarce and very hard crystalline rocks abounded. They did not lend themselves to chipping, and here was a grave problem. Then the hunt was a precarious food quest, though gathering of berries, fruits, and seeds was likely to be more remunerative than on the barer land. Let us imagine women clearing the space around some food plant, and soon learning both that a transverse edge was valuable for the purpose, and that friction rubbed down the roughnesses of the stone axe. This is only one of many guesses that might be made; but, in some way or another, there evolved the art of stone grinding and of the manufacture of hafted axes with transverse cutting edge, gradually improved by grinding to produce smooth surfaces. This led to the invention of the wedge, and with it of a new power over the forest, as well as to the availability of

enormously increased resources, and to the initiation of the habit of prospecting for new kinds of stone to be tested for hardness, toughness, ability to stand fire, and so on. The new command of stone suggests improved wood construction, dwellings and palisades near spots with food plants which were soon domesticated. Our traditional cereals, wheat and barley, probably come from the Ancient East, though the exact spots remain uncertain. We may think of plant collecting and cultivating, not only for food, but for matting and weaving. Plant cultivating and palisades suggest a new development of homes, no longer restricted to caves and rock shelters, or tents, but now fairly permanent and available in any clearing selected for other reasons.

It is likely that the ox of the mountain zone was a smaller edition of his greater brother of the old plains, and it is not difficult to imagine men capturing young animals to keep for a while for future slaughter for food, as well as for purposes of amusement, and so on. In some such way domestication may have come about in the mountain zone; it may well have had different origins in the great Asiatic grasslands with their enormous herds, gradually more and more controlled by wandering herdsmen. The abundance of wood and the development of homes and of grain food all suggest cooking, and we can all imagine various ways in which pottery came to be invented in this connection. All this carries with it the consequence that experience was becoming highly prized, that the community and its home were becoming more stable, and that the mothers acquired ability to make soft food for their babes to take after the drying of their breasts,

and we may look forward to the subsequent step (no doubt a good deal later) of the utilisation of animal milk. That a scheme of life with these features, doubtless intermingled with many contributions from the hunters of the plains, and those who were beginning a life of food production in Egypt and Mesopotamia, spread through the mountain zone seems clear; and it is probable that, especially with the rise of the prospecting habit, it spread far and wide. Western Europe thus embarked upon its long career as a recipient of culture waves, chiefly from the south-east.

The use of many kinds of stone seems to have led to the knowledge of stones that would melt with it and thus to the idea of metal, at first in the form of gold flakes and copper beads. When these new materials first came into use it is too early to say.

The Iberian peninsula was certainly very important during the period of transition from stone to metal, and we have evidence of important intercourse by sea and land over long distances at this period. The best evidence is from the great stone monuments, some of which go back to this period, though others are later in date. The dolmen formed by a group of standing stones covered by a great table of stone is very abundant in the west of the Iberian peninsula, and in that region they usually have a covered passage formed by great stones leading into the chamber under the great table. This type of passage dolmen is found chiefly in Western Iberia and in Brittany, but there are a few in Southern France. Dolmens without passages occur in Northern Spain, with a pome in the west, and in Southern France, where they are very numerous. They are also of the type found in the

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British Isles. In the Baltic region there are dolmen-like monuments, which seem to be akin to those with passages. The passage dolmens of Brittany and Southern France and some of the monuments of Western Iberia have beds of a kind of turquoise matrix, called by archæologists *callais*. This seems added evidence of intercourse, and from the early Bronze Age one gets clear evidence of coastwise links between Western Iberia, Western France, and Brittany.

Beaker pottery, a Spanish invention, spread thence to Southern Brittany on the one hand and to Central Europe on the other, mainly before the use of metal became at all general. From Central Europe it spread to East Brittany, and the people who made it lived on zones of bare land, often loess-covered, on the Continent. It is a curious point that contacts between Iberia and the rest of the Western world seem to have diminished greatly soon after the Bronze Age came to full development. Into possible reasons we must not enter here.

The idea of the great stone monuments according to some workers originated in Spain, while others refer it to the eastern Mediterranean. We need not speculate about this; it is sufficient for us that they indicate long-distance intercourse. Some types of monuments are certainly later than others, and have different distributions. Many, perhaps all, stone circles are fairly clearly Bronze Age monuments, and in the remoter parts of West Britain the Bronze Age reached down nearly to Roman times. The recent partial verification of some statements of our legendary histories about Stonehenge emphasises the point that the great stone monuments are evidences of intercourse. With

these long-distance culture-spreads we reach a stage at which we may imagine that oral tradition gained in importance, and few can read our legendary histories without finding in them echoes of the movements of those days. Santiago da Compostella was a centre of great-stone worship ages before it became a goal of mediæval pilgrimage, and this is but one illustration among many. Some churches in Wales are in the centres of prehistoric stone circles.

With the suggestion of the beginnings of highly developed culture-spreads and the beginning of contact with surviving tradition and ceremony, this effort to give a lightning sketch of some origins of civilisation may appropriately come to a close. Contributions from many districts begin to mingle, and the day of cities, states, and written records is not far off. That these arose where cultivation developed is natural, as one realises on thinking out the fact that crops fix the grower and that the food they give may be used as an insurance against famine far more easily than could animals, for animals need to be fed. Cultivation and all that it involves in connection with the settled life also means increased differentiation of labour in the community and consequent enrichment of the community life at that stage, whatever may be the dangers of extreme differentiation now.

This introduction has attempted to show how human initiative, working in varying environments, has found various opportunities, and how man has thus gradually acquired increased power over the material world as well as an increased faculty for devotion to a distant aim. Maternal devotion, in particular, has been a mainspring of progress, and the teacher can

follow out the thought that prolongation of the period of protected immaturity has opened up unforeseeable possibilities of growth and change and spiritual enrichment. To apply this idea in support of schemes for continuation education would not be at all amiss. The increase of man's power over the material world has made ever more complex the web that holds him to his various terrestrial environments. By following out this thought we shall be led on to realise the need for a very large growth of the study of the evolution of relations between man and environment, a study which is neither history, nor anthropology, nor geography, but a synthesis of all three, each providing its own specific discipline and merging its contributions in the common stock.

III

THE DIFFUSION OF CIVILISATION

BY W. J. PERRY, M.A.

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IT is now nearly a century since Lyell, in his *Principles of Geology*, showed that the present forces at work, such as rain, rivers, the air, and so forth, were perfectly capable of accounting for the great geological transformations that had taken place in the past. He contributed largely to the general adoption of the doctrine of continuity which is now the fundamental tenet of geologists. He showed that the ideas of the catastrophic school were not tenable when examined in the cool light of fact. Prior to his time geologists had usually called in all sorts of unknown forces to account for the succession of geological epochs. They had imagined catastrophes which had entirely wiped out the old forms of life, and had caused a fresh start to be made, usually, according to them, as the direct result of Divine intervention. They did not realise that small forces acting for immensely long periods of time can produce immense effects ; that the little stream, gently trickling down the hill-side, can in time carve out the great valley ; that slow, almost imperceptible movements of elevation can raise a region thousands of feet and entirely alter conditions of life. It was only necessary, Lyell showed, for men to look around them

to see at work most of the causes that, in time, had had far-reaching consequences.

In our own days it seems that the study of the growth and spread of civilisation suffers from a like general unawareness of the importance of existing processes for the explanation of the past. We are too apt to think that our early ancestors acted in ways entirely different from our own. We are told, for instance, that, though modern men may be concerned with industrial pursuits rather than with the mere getting of food, early men were primarily concerned with their food supply, and that this dominated their lives, it being the only interest that can have counted, especially in determining where they should live. According to this point of view, early man lived where he could, not where he wished to live, while modern man is able to choose his place of abode within a wide range of selection; he usually lives where he wants to live, and not where he has to live. How and why man came ultimately to master his environment in this manner we are not told, and attempts to inquire whether, even at the earliest stages of development of culture, men had some ideas of their own with regard to choice of settlement do not seem to have been very frequent.

The hazy atmosphere which surrounds the question of the origin of culture and of its early distribution throughout the world is largely produced by the failure of students of the geography and history of various regions to study carefully the modern spread of culture, and then to apply the results of such an inquiry to ancient times, to see whether they can explain the facts.

To the student who first turns his attention to the problem of the development of civilisation there is presented a vast medley of communities, in all times and places, differing culturally in some ways, but in other ways betraying so much resemblance that some sort of underlying unity must be postulated as the only possible explanation of the facts. At the present time the world of anthropological thought is rent in twain by the dissensions of two schools. One of these claims that the similarities in practice and belief which undoubtedly characterise the cultures of vast numbers of communities, existing or vanished, can be explained only as the result of some innate tendency of the human mind, under the influence of certain objective forces, to produce similar ideas and practices. The other school urges that such similarities can only be explained as the outcome of diffusion. Midway between these two groups stands another, which urges that both arguments contain an element of truth, that certainly there has been independent development of culture, and that much diffusion has taken place from certain important centres.

In order fully to appreciate the real question at issue in this controversy, it is necessary to lay down the general principle that mankind can be divided into two groups, the food gatherers and the food producers, whether agriculturists or those who depend on their domesticated animals for sustenance. In the beginning, of course, there were only food gatherers; and the earth still possesses communities in this stage of culture. Somehow or other food production came into being, and the whole aspect of things was altered. Man became the master of his destiny, and was enabled to

increase indefinitely in numbers. With the coming of food production the rudiments of civilisation were acquired. Mankind had previously possessed but little in the way of culture; but after the beginning of food production fresh discoveries were constantly being made, and the way was opened for boundless possibilities in the control of natural forces.

One of the most important problems which faces the student of civilisation is that of determining how food-producing culture came into the possession of food gatherers in outlying parts of the world. Was the knowledge of food production acquired independently in many places, or was it carried about the world from one original centre? Is independent development or diffusion the explanation? It is not saying too much to assert that the answer to this question must solve the problem of the development of civilisation and of its distribution throughout the world. For if it can be shown that the food gatherers have independently come to discover agriculture or the domestication of animals for food in all parts of the earth, then it is possible that all sorts of elements of culture have come to be discovered independently. In that case we have to study the conditions under which such communities were living in order to determine their culture. If, on the other hand, food production has been handed on from one community to another, the problem is that of accounting, first for the transition in one place from food gathering to food producing, and then for the spread of food-producing communities from their original home.

Fortunately this question can be tested in a practical manner. For it can be shown how food production has

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come into existence in several parts of the earth. It would be thought that, once food production was discovered, it could hardly fail in the course of a few centuries to spread to all parts of the earth, that the mere sight of other people getting their food in this way would stimulate hunting peoples, who were dependent on a more or less precarious source of food, to make sure of their nourishment from year to year. But this is not the case, for it can be shown that food gatherers still survive in many outlying spots.

Let us begin with one of these places. The State of California is now inhabited largely by Europeans; but up to the middle of last century it was tenanted by a few Indians in the food-gathering stage of culture, some Spanish missionaries, and a few wanderers from the United States who had settled there. The country lay wrapped in a profound cultural slumber. The Indians showed but slight signs of taking up with the new-fangled notions of getting their food that the Spanish fathers taught them, and preferred their time-honoured mode of getting their living. What was good enough for their fathers was good enough for them, so why worry about food-growing and the future? They paid no attention to the activities of the Europeans in respect of getting food, still less did they heed the yellow metal which was found in some of their streams. Probably they had seen it, with its colour like that of sand, but it was of no use to them; so they let it lie. But one day, in 1848, a European man found this metal, gold, in the gravels of a stream. He attached a value to it, because he had acquired, during the course of his education, a culture which had as one of its essential features an intense appreciation of gold. This appreciation of gold

their fellow-creatures as possible. Later on, of course, the more natural activities of agriculture, fruit-growing, stock-rearing come into play, and civilisation becomes established. In Australia the production of gold falls steadily each year, while other sources of wealth grow apace. The population increases and needs food and clothing, which are supplied by the country. That is the natural development of things, and it can be watched all over the world, and in all ages, alongside with the more spectacular mode of diffusion of culture.

The activities of modern Europeans have led them to all parts of the world in search of materials of which they have need. One of the most important of these is, of course, gold, but other materials have played their parts, though these may have been somewhat less obtrusive. Thus it comes about that the culture of the modern peoples of Australia is so like that of Britain that a city such as Melbourne might well be in England. So also the culture of the United States is like that of Europe to a close degree. The ferment of Western culture is working throughout the world, and it would seem that, as time goes on, the whole world will acquire a more or less uniform culture. The degree of absorption will depend upon local conditions. Where there is an ancient civilisation, already well established, much resistance is to be expected; but peoples of the lower culture will suffer severely from the effects of contact, and in a short space of time we are destined to see all such communities deprived of their original culture, and in possession of some bastard mixture of it and European civilisation. The oil lamp, the gramophone, the sewing machine are now common-places in the jungle of Borneo; European clothes are

worn the world over, regardless of their suitability; members of all races of the earth are coming to Europe to acquire knowledge. In time all will be Europeanised. Europeans are now actively engaged in ransacking the earth for its treasures. To-day geologists are prying into all the odd corners looking for oil. Where they find it in the course of time European civilisation will be implanted, and the local population will be profoundly affected in culture. The need for rubber to an ever-increasing degree causes the province of Malaya to be provided with roads, houses, railways, and other appurtenances of modern civilisation, and the native population either die out or become absorbed, culturally if in no other way, in the general mass.

When we turn our eyes backward in time, and consider what was going on, say, five thousand years ago, we find that there was a high degree of civilisation in the region of the Ancient East, in Egypt, Crete, the *Æ*gean, Asia Minor, Syria, and Mesopotamia, with certain outlying settlements in the Danube valley and elsewhere. This constituted beyond doubt the centre of civilisation of the whole world. Nowhere else can any such dates be assigned for the earliest stages of food production. In America it is becoming increasingly difficult to push back beginnings beyond the first years of our era. In China and the Far East the tendency is to look upon four thousand years ago as the uttermost limit to which beginnings can be assigned. As for Europe, we all know that it owed the whole of its culture in the beginning to the Ancient East.

When we examine the civilisation of the Ancient East in its early days we find that, as in modern times, the people were using 'all' manner of materials which

they did not find in their own countries. Even in the case of those materials that they did possess in a natural state in their countries, the quantities that they used show that they must have got much from abroad. The copper, silver, and gold of Crete must have come from elsewhere; the Egyptians must have got their silver and lead from some other country, and also the Babylonians.

This search for raw materials began at a very early date. In the pre-dynastic age the Egyptians were using emery with which to rub down their stone vases. Professor Sir Flinders Petrie has found lumps of emery in their graves, which puts the matter beyond doubt. This must have involved expeditions to Naxos, an island of the Cyclades, where it is found. There is plenty of similar evidence to show that the most ancient civilisations were getting their raw materials from elsewhere. If we come down later in time and read the twenty-seventh chapter of Ezekiel, we find that the Phœnicians, who acted as carriers for Egypt, were procuring raw materials of the most diverse sorts from all directions, their field of activity ranging from India to Ireland.

It is fashionable in some quarters to speak of the process by which the ancient civilisations got hold of their raw materials as "barter." This implies, I take it, that there were peoples living in the countries with gold and so forth who understood its value, and were willing to exchange it for products of the Mediterranean. It fact, it is usual to regard the commercial activities of the Phœnicians as of the nature of trading. It is said also that bronze axes and daggers were "traded" throughout Europe.

There is, so far as I am aware, no body of evidence in favour of this hypothesis. All that we know of the process goes to show that the peoples of the Ancient East were actually going themselves to get what they wanted, just as, in our own days, Europeans themselves go to other countries to open them up, even when the country has a relatively high degree of civilisation. The whole of the mining of India, for instance, is in the hands of Europeans. They go there and procure native labour to work for them. They provide the brains. We know that the Phœnicians themselves, doubtless with the aid of hired labour, turned the island of Thasos upside down in the search for gold. Also Diodorus tells us how they forced the natives of Spain to work for them. Phœnicians themselves went to the outlying countries of Europe and got stores of wealth from them. The native population paid no attention to gold, silver, or other substances. They did not value gold; they could not get the silver, which required an immense amount of metallurgical skill. They were simply passive agents in the hands of highly civilised men from elsewhere, bent on getting certain things that their country contained. We know, further, that the Carthaginians actually sent out expeditions to colonise countries, and we may be certain that they chose their sites carefully, and took care that they were near sources of wealth.

The records of the Egyptians show that they, too, were going abroad to get their raw materials, and were not in the beginning "bartering" or "trading" them from the local populations. The wall-paintings in the great Eighteenth Dynasty temple of Hatshepsut at Deir-el-Bahri, near Thebes, show pictures of the

expeditions of the Egyptians to the land of Punt—that is, Southern Arabia and the opposite Somaliland coast—to get stores of myrrh, frankincense, ivory, gold, feathers, and so forth. These expeditions had been in progress for at least two thousand years. Likewise the Egyptians had been going from very early times to the Syrian coast, where, in the Fourth Dynasty, about 3000 B.C., they had a considerable settlement. They got from Syria cedar-wood, silver and other metals. In the Sinaitic peninsula they certainly were mining for long ages, since far back in the pre-dynastic period. In later times, certainly from the time of the Sixth Dynasty onwards, they were going into the Sudan and making great colonies there, as is evident from the recent excavations of Dr. Reisner.

Activities such as these must certainly have aided very materially in the process of diffusion of culture. And plenty of evidence is readily to be obtained to show that this is so. Since the Egyptians, Phœnicians, and others were constantly sending out expeditions to get certain raw materials, it is to the sources of these materials that we must look for evidence of this diffusion. Since gold was the very first metal sought for by man, it will be useful to cast a rapid glance over the great gold-fields of the past in Europe to see what traces may be found there of diffusion of culture.

It may come as a surprise to many to learn that parts of Europe must, in the past, have been El Dorados containing untold quantities of gold, not to speak of silver and other metals. Even at the present day certain of the rivers of France, not to speak of Devon and Cornwall in our own country, still have a certain amount of gold in their gravels. The Rhine,

Rhone, Arve, Ariège, Garonne, Salat, Ardèche, Cèze, Gardon, Herault, and other rivers of France are still well known as gold rivers, while in England and Wales gold is occasionally found in the rivers of Cornwall, Devon, and Merionethshire. Spain and Portugal must formerly have contained immense quantities of gold in the gravels of their rivers. This gold had accumulated for untold ages, while the food gatherers of the Palæolithic Age wandered about paying no heed to it, because, just like the natives of California and Australia, they did not value it.

Then came men who sought for gold and planted their settlements in those regions which contained the precious substance. In my opinion and that of some other students the gold-fields of Spain and Portugal, France and Britain, were exploited at a very early age by men who made what are termed megalithic monuments (*e.g.*, Stonehenge). These men were able to detect the presence not only of gold, but also of other metals such as lead and silver and copper; and their skill in this direction was so great that we find traces of them near all the important sources of these minerals. We find, moreover, that the monuments they constructed were, throughout the mining areas of Western Europe, so similar to one another in type that their common origin cannot be disputed by any candid observer. So, just as we find that Western European civilisation has spread across the world, principally as the result of the activities of miners and other seekers for raw materials, so the early civilisation of the Ancient East made its impress upon the lands of the Mediterranean. In South-eastern Spain the work of Louis Siret, a Belgian mining engineer, has shown that the earliest

food-producing communities possessed cultures that had strong traces of the influence of the Ancient East. This is especially so in the case of the period when copper implements first appear in the country. For in these settlements in the mining area of South-eastern Spain we find objects of ostrich shell, of hippopotamus and elephant ivory—that is to say, objects made of materials that must, I think, have come from Egypt. We find also many other signs in the remains of the influence of the Ancient East. That is to say, men who were engaged in exploiting gold, silver, copper, and so forth, had transplanted to Spain some of the culture of the Ancient East. Had there been none of this material wealth to attract them they would not have settled there, and only the gradual increase of population in Europe would have led in time to the settlement of the country. Only the presence of much gold in the sands of certain rivers, especially in Portugal, led to the occupation of particular areas by men who built large megalithic tombs for their dead.

The case of South-eastern Spain is yet more romantic. For M. Siret has found beads of jet and amber as well as ostrich shell beads and ivory ornaments. This jet must have come from Whitby, and the amber from the Baltic. So intercourse must have been widespread in those days. Moreover, in the neighbourhood of Whitby and in Scandinavia, exactly in those regions where amber is to be found, are typical megalithic monuments, showing that the old exploiters of natural resources had found their way to those places.

Facts such as these open up wide vistas and enable us to begin to see that the past was very like the present. In the millennia before Christ there was a

great civilisation in the Ancient East, using all sorts of raw materials which the people had come to value. These raw materials for the most part were to be found in outlying countries, such, for instance, as France, Britain, and Iberia. In these countries we find evidence, often vague it is true, but nevertheless evidence which, when the whole continent is taken into consideration, enables us to be quite certain that the men who lived in the countries of Western Europe were all inspired from the same source. From that source there had proceeded influences in all directions, which influences, owing to the vicissitudes of time and space, became weaker in some places than in others, but nevertheless always revealed their focus of radiation.

In this way the continent of Europe became "opened up," and acquired agriculture and the domestication of animals, as well as metal-working and other fundamental elements of culture. Signs of the exotic origin of agriculture are plentiful: wheat and barley, the fundamental food plants, are both non-European in origin; rye and oats came into cultivation only at a much later date. Along with the seeds in the Swiss lake-dwellings there were mixed certain weeds belonging to the Mediterranean and not to Europe. The European food gatherers thus became food producers mainly as the result of the activities of strangers seeking various substances and settling where they found them.

It is curious to reflect that the aim of the first civilised exploiters of Europe was very similar to that of modern men who opened up California. In both cases by far the most obtrusive material sought was gold. The regions of Iberia, France, and Britain

occupied most thickly by the builders of megaliths possessed stores of gold. Of course these folk settled in other places as well. For instance, in France there is good reason to believe that they were exploiting the silver, lead, and tin of the country. In Britain, too, there are several accumulations of remains round lead mines which are strongly suggestive of ancient exploitation. In Scandinavia, again, there is no doubt that amber was the attractive force. And we must also consider cross-country routes, food-supply areas, and the like, in connection with these ancient schemes of exploitation. But, in spite of these facts, there is no reasonable doubt that, in ancient times, the metal most sought for, in Europe and in other parts of the world, was gold.

In the most widely separated regions, in Korea, in Siberia, in India, in New Guinea, as in Europe, you will find traces of the same civilisation, in the shape of megalithic monuments, in close proximity to ancient gold workings, standing as imperishable witnesses of the futility of human endeavour when it sets itself to perform irrational tasks.

When it is said that the early spread of culture was due to the fact that the civilised men of ancient times had needs that they sought to fulfil, so that they went abroad to find raw materials, and made settlements where they found them, it does not for a moment mean that thereby the whole process of growth and development of civilisation is explained. It is impossible to put life into a formula. All that can be said is that by this means the germs of culture were spread abroad and implanted in certain favoured spots. These germs grew up and in time gave rise to organisms which

proceeded to live their own lives, often independently of the mother-organism. Thus, while it is undeniable that the Minoan Age of Crete was the direct result of Egyptian influence, it is at the same time evident that the Cretan civilisation had its own characteristics. The Cretans certainly originated many elements of culture, but, at the same time, they owed their inspiration to Egyptian sources.

The diffusion of culture is an organic process. An impulse sets out from a focus. It is carried to another country, perhaps by a few men. There it has its effect, perhaps profound, perhaps weak. The original carriers of it may disappear, even though their original influence had been immense. The native population takes up the new ideas, amalgamates them with what it already possesses, and the result is something new, something characteristic of the country. No one would assert for a moment that Indian civilisation had not its definite characteristics, but it would be hazardous to assert that this civilisation had sprung up entirely independently of outside influences. Once a cultural element is in existence it is capable of infinite modification, and when transplanted to a fresh country it can hardly help being altered, and such processes of alteration can be witnessed in all parts of the earth.

The civilisation of the Chinese was implanted in the valley of Hoang-ho, presumably by immigrants from the West. Once there the natural process of increase of population due to the practice of irrigation caused the Chinese to swarm down certain river valleys, and to reach the basin of the Yang-tse-kiang, where they multiplied exceedingly. Chinese civilisation has its own characteristics, and the Chinese have been

responsible for many additions to the cultural heritage of mankind. Nevertheless, it seems beyond reasonable doubt that the seeds of Chinese civilisation were implanted by men from elsewhere, who were attracted by the gold and jade of the country.

In like manner the foundations of the Greek civilisation rested on the civilisations of the Ancient East. The Greeks made great and original contributions to civilisation, but they acquired the fundamental elements of culture from elsewhere. The beginnings of Greek thought, for instance, are to be found in Miletus, a city strongly impregnated with Mediterranean cultural influence. Only as the result of the early teaching that they got from strangers were the Ionians able to make their great advances in culture.

Closely linked with the question of diffusion of culture in early days is that of degradation. When a little thought is devoted to the matter, it is soon seen that a drop in cultural level, speaking, of course, of the material arts and crafts, is inevitable. In our own days we know full well that the Dutch settlers of the Transvaal, the voortrekkers, had not the level of culture of their kinsmen in Holland. The experts in certain arts and crafts, particularly those associated with luxury, did not migrate out to South Africa, but stayed at home. In like manner we do not expect to find strong traces of Egyptian arts and crafts in their mining settlements. A study of Sir Flinders Petrie's *Researches in Sinai* will show that the Egyptian mining settlements in that place, although so near to Egypt, were very low in the cultural scale, and reveal little of the real magnificence of Egyptian culture. This is likewise true of their mining settlements in Nubia and

the Sudan. The transplantation of a civilisation is a long and difficult process, and innumerable causes can help to produce decay and simplification of culture. For instance, assuming expeditions going from Egypt to work copper, lead, and other mines in Syria, it is not to be expected that the Egyptians would take with them expert stone-masons. Consequently any stone work that they produced would be of unworked stone. In this way rough stone monuments may follow monuments of hewn stone.

The degradation of culture as the result of diffusion is a phenomenon that is practically universal. Throughout the world, in all times and ages, it is found that the arts and crafts of a centre of cultural diffusion are higher in standard than those of daughter settlements. This principle can be applied to any element of culture whatsoever. Whenever a fresh development takes place, it practically always reaches its summit in the place of origin.

When the diffusion of culture is studied in all its aspects, it is very soon found that the general principle by which we are to account for the development and spread of culture is that of continuity. Speaking in general terms, it can be laid down as an axiom that each community above the food-gathering stage of culture has acquired its fundamental arts and crafts from some other community. It certainly has not invented them afresh. The manner in which this culture is received will largely determine the life-history of the community. It may happen that some fresh development may take place in one of the arts and crafts that has been adopted—as, for instance, in the Moluccas, where, as Dr. Haddon has shown so clearly,

the outrigger canoe was invented as a modification of boat-construction, and this development is in its turn handed on. Sometimes an entirely new invention is made, as, for instance, the wheeled vehicle. This in its turn becomes common property among men. But in all these cases it would seem that a new development takes place only once, and then is propagated in many directions according to circumstances.

It may therefore be said that the study of the growth and diffusion of culture is a discipline in itself, and that it is an indispensable adjunct to all humanistic studies. It is all-important to understand how any community came into possession of its cultural equipment, and this is only to be done as the result of a wide historical study of the process. In the study of geography this is all-essential. In fact, it is hard to see how any real progress is to be made in human geography without the aid of this branch of inquiry. The reaction between any given community and its environment depends largely on the cultural equipment of that community, and often may have but slight reference at all to the geographical circumstances in which the community finds itself at the moment. When it is understood that elements of culture are probably only acquired once—the possible exceptions being so few as to be practically negligible—then it is obvious that what counts in the culture of a community is not so much the geographical circumstances in which it lives, but its cultural equipment, which determines what it is going to extract from its environment. With the knowledge that the growth and diffusion of culture is a perfectly continuous process, determined by the aims of men, then it is seen that the geographical circumstances of any country can do little

more than exert a passive control, so that within a very large range of conditions, climatic and otherwise, men have a large choice of settlement, and this choice will depend on their degree of culture, which is primarily determined by causes acting within human society itself.

The study of the growth and diffusion of culture is all-essential for the historian also. For he is thereby enabled to understand the real meaning of the social institutions with which he has to deal, and thus can distinguish between cause and effect. History without the adoption of a wide, comparative method will hardly be able to go far beyond the purely descriptive stage. There may, of course, be some who desire nothing more than the production of an accurate narrative of events, past and present. But some of us look forward to the day when the study of the past will throw light on the causes of events that have happened. We believe that the adoption of a wide, comparative method will make it possible to distinguish between cause and effect, to make history into a science, to predict the consequences of certain lines of action, and thus to make for the ultimate well-being of mankind. Only when social institutions are taken and studied, as, for instance, they are studied by Professor George Unwin, from their early beginnings, will it be possible really to understand those institutions, to realise what part they play in moulding the lives of those who come under their influence. There are signs that this wide, comparative method of viewing human affairs is making headway. May its progress be still further accelerated in the future.

IV

THE BIBLICAL RECORD

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I

THE Biblical Record begins in the ninth century B.C. The monarchy had been founded. Israel was not the least considerable among the nations. Life was vigorous, and thought was expanding in the northern kingdom. The southern kingdom was, as yet, smaller and simpler, more naïve in spirit. In each kingdom history began to be written. The historians looked back upon the past and told the story of their nation's origin. They told it from the very beginning, shaping rude legend into significant poetry. They almost sang of the creation of the world, of man's pristine innocence and happiness and companionship with God. They told of change, catastrophe, recovery, of cities, wars, empires; of Abraham, their own first father, journeying westward from Babylonia—dwelling in Canaan, dwelling, scarcely settling; still a wanderer among the people of the land, still dwelling in tents as a pastor of flocks and herds, not a farmer of the soil; of Jacob and Joseph and their descendants in Egypt, strangers and sojourners, and for a long while slaves; of Moses who rescued them from slavery and led them through the wilderness, nomads again, as Abraham had been. That

nomad character is deeply stamped henceforth upon this people. They conquered Canaan and settled there. They did become farmers. They lived in cities and had kings like the other nations. But their genius was nomadic still. Pilgrims and sojourners they remained at heart. They were often fierce and lustful, like their neighbours, but could never do it gaily. A serious conscience troubled them.

And there was a deeper reason for this. From early days they had the idea of God as really God in quite another kind from the religious idea of their neighbours. According to the Biblical Record, Moses, when he freed Israel from Pharaoh, inaugurated Israel's allegiance to the God of Israel. Moses did so because he had himself passed through an intense experience of moral and spiritual reality. God, whom he proclaimed, he knew. Throughout his career he was in communion with God, with this often grim, and sometimes almost savage, God; but, on the broad whole, this good, tender, faithful God, the unchanging real God. Criticise the Biblical Record as impartially as you can, this general impression persists. To ignore it raises endless difficulties. This impression grows into the dominating character of the Record as it proceeds from tradition to history. Allegiance to and knowledge of the real God distinguishes Israel among the nations of the early world. So far as we look for Israel's influence on the general development of civilisation, we are bound to make more of this intelligent loyalty to the real God than of any other national endowment.

The historians of Israel read back their maturing faith in the real God quite to the beginning. This was the God whom the first ancestors of mankind knew,

contrary, the Jewish Church succeeding to the Hebrew monarchy broadened in variety of faith, in assimilation of new knowledge and new relationships, in transformation of antique patriotism into a more mysterious sense of destiny. Contact with Hellas and Rome made for humanities, as Babylon and Assyria had never done. The old nomadic antagonism persisted; but that was always Israel's way, to help civilisation rustically, to hold aloof and stimulate sincerity, to breed John Baptists, not minions of empire.

And so we pass from old to new, from Jewish Church to Gospel. The Gospel sprang from village life in Galilee. That was not the ecclesiastic life of Jerusalem. Galilee lay on the high road of the Roman Empire. Freedom and romance had room there. There the Pharisees did stand for Sabbath-keeping and the Law, but also for popular religion, for the new hope of the resurrection of the body, for the apocalyptic enthusiasm of the Kingdom of God. The Gospel, our Lord's good news, was just the proclamation of that Kingdom as at hand, as immediately to be expected. The failure of this Gospel was due to our Lord's transforming of crude traditional theology and vulgar political aspirations into an inward moral simplicity. His Kingdom at hand was the Kingdom of "our Father in heaven." And the failure of his Gospel was its victory. The absolute morality of the Sermon on the Mount, his own unaffected perfection, the serene sacrifice of himself upon the Cross, brought a principle of simplicity into the hearts of men which was as nearly a new creation as anything within the conditions of history can be. Altogether new it was not. It had been the theme of prophecy. But now

that theme was purified from all base elements, and was worked out practically by our Lord as it had never been before.

Then he died, giving his life (as he said himself) a ransom for many. That he still lived after death was agreeable to the faith of a Pharisaic Jew. St. Paul said that this faith must be denied if the Lord had not truly risen. The difficulty in accepting the Lord's resurrection was just that difficulty which is felt when any speculation is brought surprisingly into the range of actual experience. The first Christians had the experience; some by vision of their living Lord, all by receiving his living Spirit. That gift of the Spirit made the new principle of simplicity an ordinary profession and a working impulse for all sorts and conditions of men. Thus a fresh stage was entered in the development of civilisation. If lines may be drawn anywhere across the flow of history, the death and resurrection of the Lord Jesus is the most certain and distinct. However accepted, explained, criticised, or denied, the mind of mankind has been in a fresh environment since that recorded event, and the environment has affected ideas and efforts for progress.

In the Galilean Gospel the apocalyptic hope of the Kingdom was transformed by our Lord. He did not make it easier. The morality of the Sermon on the Mount is lofty and austere. Treasure in heaven and a narrow way; take no thought for the morrow; give bread for the day and a disciple will therewith be content. We seem to be lifted out of the practical into another world. It is a dream; or it is extravagantly figurative, like turning the other cheek; or it is part of the apocalyptic illusion, a rule meant only for the brief

interval between its promulgation and the end of the world. Thus, or by like subterfuges, the uncompromising demand has been modified. The test of earnestness in the pursuit of civilisation has always been whether men will set their goal so far forward. The absoluteness is the eternal quality. The morality comes to each generation with the shock of revolution, but with the fitness of necessity. Each generation has sufficiently accumulated wisdom and experience to make the required adaptation if it will. Each generation has also a duty of expansion.

We to-day have to see how the rule which conscience assures us would work in private life may be applied to international politics. Civilisation is half barbaric still because we still hesitate about adapting and expanding. We will not take the risk of generosity or the pains to think things out.

Yet the Biblical Record would help us to do so. Therein we find models. We see how such adaptations and expansions were made at stage after stage in the first century of Christendom.

In Acts we see the little flock, the primitive Church in Jerusalem, waiting in the exultation of a vast hope for the advent of the Lord from heaven. In a few days or months or years he will come with the glory of the Kingdom, and at last right will get the overhand of wrong. That was an unreasonable anticipation of consummated civilisation, which nevertheless created a pattern of cheerfulness for all time. Paul dispersed the dream. This hope of happiness was to be shared. Christians must be missionaries. The Gentiles must be let in. He got his way in spite of timidities and malignities.

And the admission of the Gentiles carried with it the supersession of the Jewish Law. Revolutionary morality again. On the face of it a contradiction of the Sermon on the Mount. In the heart of it the adaptation and expansion which time and circumstances demanded. It was a mighty step for civilisation. The Jews had then a faith and a rule of life which made them superior to the Gentile world. Roman lawyers no doubt had some excellent gifts for mankind. The peace of the Roman Empire was of use to the world. Paul used it as a missionary and valued it. But the morality of Greece, Asia, and Rome was not worthy of a civilisation with a future before it. The Roman Empire was no republic of Plato. A few years earlier Cicero had been a figure alien to his time and place, like a Christian and a gentleman among savage fighters for their own hand.

The Jews were justified in disliking the all-absorbing empire. But they were churlish in their aloofness. They stood in the way of improvement. The Christians carried the destiny of the growing time, and when the Christians were freed from Jewish Law the true course was open. But they had to form a law for themselves—that is, for the world. To throw away the Jewish Law and adopt the way of the world would have been apostasy. Paul carried the revolution in ethics right through. He reaffirmed the Sermon on the Mount in the modern language of his community. Treasure in heaven; poor in spirit; lose life for the Master's sake to find it: these principles he conserved. He put Christian charity in the place of the proud virtue of the pagans. He sang the hymn of charity. He renounced family, wealth, honour, and endured

with gladness the hard discipline of an Apostle. And he laid down his life for his friends at last.

II

Another stage and a corresponding adaptation appears in the group 1 Peter, Hebrews, Apocalypse. These books come from a period of trial and persecution. The Apocalypse should be compared with the apocalyptic book called 2 Esdras in our Apocrypha. At first sight the Apocalypse of St. John may seem fierce. But it is a different kind of fierceness from that which mars the very considerable beauty of 2 Esdras. John has indeed the roughness with which the old Prophets "hewed" their own people. He has also a tenderness for sufferers which is hardly to be found outside the Gospel influence, a tenderness of inward quiet and bracing hope. He looks with confidence to the Lord's Day when right shall have the overhand of wrong. And that day will not be in another world of mere religious interest. It will be the realised idea of civilisation, the city of God in this earth among men. It will be divine glory shed wide and peace among men of goodwill. This Apocalypse warns Christians against the awful ruin of apostasy; it has no gusto of vengeance upon enemies of flesh and blood. In later days interpretation perverted this charity. There is a passage in which the apostolic text promises that the heathen nations shall walk in the heavenly light. The later Byzantine text inserts the proviso which the author scorned to express —the nations of them that are saved. This is a palmary example of the daring of inspiration in contrast with the commonplace into which religion, politics, and

scholarship decline, that so unnecessarily fatal bar to success in civilisation.

Thus, then, even the lurid Apocalypse is generous with Gospel charity. In the other books of the group this is obvious and pervasive. Love your enemies; turn the other cheek. St. Peter bids the Christians of Asia Minor honour kings, honour the emperor. And that emperor was probably Nero, who had lately killed St. Paul and was threatening them with fiery trial. Indeed, it was among these Christians that the seed of genuine civilisation was germinating—viz., that reasonable love which only seems unreasonable because average people will not go by reason. The Christians were impelled by trial to reason out their faith. They had believed in the regeneration of mankind through the expected advent of the Lord. St. Paul's later epistles already show him aware that this advent would not be what Jewish picture language made it. The Lord would not come immediately in visible pomp. A vista opened of continuous gathering of mankind to himself. Through his body the Church, in spiritual growth, the inclusive Christ would be fulfilled. Then at last all would live in him as one man fully matured.

So Paul modernised. Presently events accustomed others to think as he did. His judicial murder was the close of the kindly patronage of Rome. Christianity was to be henceforth unlawful. The peril of the Christians was aggravated by the revolt of the Jews. The Christians were suspect to patriots and imperialists alike. The Roman Empire itself was racked by civil war. It was a turbulent time, a time of suffering. The Christians did not meddle with politics, but they held to the cause of civilisation. The emperor, whoever he

might be, represented reason, order, and the peaceful business of the people. They held by the emperor, though they left the Romans to settle who should be emperor. They refused to join the Jews in their revolt, and they found themselves obliged to break with Jewish worship more thoroughly than had hitherto been necessary. The Christian faith was a substantial hope in a progress destined to continuance. The Jews were stultifying such hope. The Jews were standing then for retrogression, violence, and hate.

But having thus withdrawn into the quietude of the faith, the Christians reconsidered the faith itself. They were disembarrassed from the inconvenience of their Jewish ancestry. They could revise their heavenly hope along the line which Paul had pricked out. His vista was beginning to fill up. These days of trial were evidently days in which the Christ was being fulfilled. In the trouble of the times he was coming. The advent, the Day of the Lord, was indeed at hand, just as their Lord had promised. It was at hand. It was actually now. For the morrow, the Last Day, the end of the world, there was no need to take thought. He was coming very really while it was proclaimed to-day. And the Christian duty was to be loyal to him, and follow where he led, and to run with joy and patience thence he was even now setting before them.

This revision of faith was a turning-point in the history of the world. If we are to consider that history as the development of civilisation, this revision meant that Christianity recognised the duty of the hour and the new truth of the hour punctually to the hour; and that therefore Christianity could play its part in the unfolding drama of human destiny during the succeeding

period, till (that is) another turning-point should be reached, another revision, adaptation, expansion should become necessary. And since Christian charity is the whole secret of civilisation, the importance of this development is clear.

Linger over it a few minutes and see what it implies. Our Lord's transformation of the vulgar idea of the Kingdom is brought out clearly and practically. The traditional scenery (so to say) is put aside: reason is not bound to accept the kind of miracle which reason finds impossible. Despair or scorn of this world, while hope is centred on heaven as on another world, is disallowed. Heaven is a state rather than a place, and heaven is entered now. Man enters heaven when he prays. He enters heaven in doing his present duty. He enters heaven especially by dying; but by dying as the consummation of life spent and perfected on earth in the following of the Lord Jesus, not in dying as a passage to a second life in which all that is amiss here will be spontaneously set right. The setting right that interests Christians is a business to be worked at here and now. Here and now in this mortal arena the spirits of just men grow to that perfection which death seals. Such a theology of death meant much during persecution. Heroic deaths illustrated the manly theology. The heroism was never tinsel, seldom set off by specious romance.

Days of persecution are generally days of realism, and this realism made another point in the new learning of the Christians of that period. They advanced to a fresh appreciation of the lowliness of Christ, of the horror of the Cross, of the real manhood of the Lord Jesus. In the real man-

hood of the Lord Jesus is the source and test of what we call Humanism in our modern vocabulary; out of it is fashioned the fibre of civilisation. It energises wholesomely and vigorously, so long as it is involved in its complementary force, the manhood of Jesus in the universal and divine Christ, who is universal just because he is not sprung out of our experience, but is in it and beyond it, and is only reached by renunciation of sensuous second bests.

In the group 1 Peter, Hebrews, Apocalypse, this is all sketched boldly and variously. The sketch is completed in the Gospel and Epistle of St. John, the crowning work of the apostolic age. Here all is gathered up and simplified. All is Spirit here, and Spirit is love, a word easily abused; but our translators, like the Latins—Jerome or others—seem to have felt the necessity of venturing upon it; charity would not have been elementary enough.

In these Johannine writings a story is told so simply that children enjoy it, yet with inexhaustible profundity. It is a story of utterly human affection growing naturally to an intensity which binds Master and disciple into absolute unity within eternal godhead. In earthly character and homely event the eternal breaks often through. In common things, in present experience, here and now, the heavenly essence is manifested. The majesty of the Lord Jesus emerges in another manner than in the earlier Gospels. But the real manhood is all the more insisted upon. This is the Gospel of *Ecce Homo*, and the Epistle expressly emphasises the same. Tremendous claims to unity with God as Father are made, but these claims are balanced by equally astonishing promise, to all men who will accept

them. All who will may be raised into the same unity. The same glory that thou hast given me I have given them, says our Lord in his prayer in chapter xvii., that all may be perfected into one as we are one. Put very simply the Saviour's doctrine in this Gospel may be concentrated into this paraphrase: I am indeed the very Son of the heavenly Father, and the Father sent me to tell you that if only you will trust me and come with me to him, you may be his sons just as I am. Thus the title Son of Man is opened and explained. In the earlier Gospels the Lord prefers that title to all others. He uses it of himself, but it does not signify himself alone and apart. It means himself and mankind rising with him through death to the life which is life indeed. In the Johannine Gospel the title Christ is continually corrected or avoided. It was too narrow and national a title for John's universal reading of the Saviour's person and office.

In this Gospel the last encumbrances of Jewish tradition, imagery and materialism, are stripped away. The advent is no coming as from another place at a future day. The Master, the incarnate Word, is always here. Now and here in present experience he is manifested, not to the eyes of sense but through the Spirit. Judgment is not foretold for some last day. It proceeds here and now, inevitably, naturally. Judgment is the discerning between goodwill and falsehood, which must in the nature of things be effected by the presence of the Light of the world. Eternal life, too, is here and now. I am the resurrection and the life, said the Lord to the sister of Lazarus, when the far-off mystery of resurrection at the last day brought her no comfort. To know the Father, and the Son whom he sent, is eternal life,

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them. All who will may be raised into the same unity. The same glory that thou hast given me I have given them, says our Lord in his prayer in chapter xvii., that all may be perfected into one as we are one. Put very simply the Saviour's doctrine in this Gospel may be concentrated into this paraphrase: I am indeed the very Son of the heavenly Father, and the Father sent me to tell you that if only you will trust me and come with me to him, you may be his sons just as I am. Thus the title Son of Man is opened and explained. In the earlier Gospels the Lord prefers that title to all others. He uses it of himself, but it does not signify himself alone and apart. It means himself and mankind rising with him through death to the life which is life indeed. In the Johannine Gospel the title Christ is continually corrected or avoided. It was too narrow and national a title for John's universal reading of the Saviour's person and office.

In this Gospel the last encumbrances of Jewish tradition, imagery and materialism, are stripped away. The advent is no coming as from another place at a future day. The Master, the incarnate Word, is always here. Now and here in present experience he is manifested, not to the eyes of sense but through the Spirit. Judgment is not foretold for some last day. It proceeds here and now, inevitably, naturally. Judgment is the discerning between goodwill and falsehood, which must in the nature of things be effected by the presence of the Light of the world. Eternal life, too, is here and now. I am the resurrection and the life, said the Lord to the sister of Lazarus, when the far-off mystery of resurrection at the last day brought her no comfort. To know the Father, and the Son whom he sent, is eternal life,

the Lord says in his prayer in chapter xvii. The discourse of the Last Supper explains both sayings. I am going, the Master told his disciples then. I am going, but I go to the Father. In thus going I come. I come in the coming of the Spirit. In the Father's house of universal life there are many mansions. In one of those mansions we have been together in these happy years of visible companionship. That is over now. I am going out of the mansion of the senses that you may henceforth be with me in the mansion of the Spirit. Thus their Master cheered them.

He taught communion of saints instead of resurrection of flesh. Of flesh? After all, this Johannine doctrine is no new doctrine. Paul had said that flesh and blood inherit not the Kingdom of God. The body that Paul says is immortal is purely spiritual. Love, joy, peace: only thus, in terms of character, does he approach a definition of it. But there is a difference between the Pauline and Johannine language. Paul argues, but not with over-strict logic. What he delights in is an *O altitudo*. He persuades by his noble sincerity of rhetoric. He persuades all and satisfies some. But he does not satisfy all. Reason supersedes rhetoric as the mind of man becomes civilised. And the Gospel ran a corresponding course, from Galilean simplicity, through Pauline rhetoric, to the quiet reason of John.

There is difficulty in reconciling civilisation with religion. *Le divin ciel a tort devant l'esprit humain.* The puritan element in religion opposes the humanistic element in civilisation. Celsus and the imperialists felt this about later Christianity. The adaptations and expansions of the Sermon on the Mount are recurrent

attempts to effect this reconciliation. And when the ruder discrepancies have been smoothed out a more subtle adjustment has still to be sought. Reason and faith, experience and the inner certainty which transcends rather than is experience, these also must be harmonised.

The final chapter in the Biblical Record, the Johannine Gospel, represents this ultimate unity. John's Gospel is the gospel of reason. Such a gospel was needed then and is needed to-day. It won its way to recognition slowly, as reasonable religion always does. When at last it was accepted by the Church militant at large, it was toned down by interpretation as it still is toned down to the popular key. But then as now its reason lives, its catholic philosophy. Now as then the lovers of men, those who pity the hardships of poor men, and believe that the Spirit of God is the Spirit that bids man rescue man from hunger, nakedness, misery, indignity—now as then these find encouragement and freedom in this Gospel. It frees from superstition with its consequent fear and cruelty.

This Gospel is indeed open to misconstruction. It is reasonable; but it is also a work of art, poetic as well as philosophic. It treats history lightly. It is bold in symbol. No longer in the mansion of the senses; that is the argument of the last discourse. But a picture follows after argument; the picture in the last chapter of the new day dawning on the disciples, who are Galilean fishermen again, and the Master visible and audible as they break their fast and walk with him. I am the resurrection and the life: that is the heart of the narrative of Lazarus. But the narrative is given too. Symbol rather than history; but how inimitably

told. Who would consent to lose it? And who that really feels its power would care to discuss the superficial contradiction? Philosophy and sacred myth. The juxtaposition is perfectly natural. There may be other explanations of the evangelist's method. This explanation is but a groping after forgotten fact. But so must every other be which is proposed.

III

A reasonable faith. The whole Biblical Record has been working towards that. Bring together two famous records of man's mind and manners, *The Bible* and *The Golden Bough*. In *The Golden Bough* you have the history of superstition, and you see what superstition means. It means fear where no fear need be, and cruelty the concomitant of fear. And the moral of *The Golden Bough* is that the spirit of man is the lamp of the Lord (as a Hebrew humanist said), that reason is the gentleness of Christ in men, and that reason can transform superstition into a generous devotion to the common good. But, on the other hand, this record shows how persistent superstition is. Relax vigilance but a little, and back comes the gloomy horror.

The Bible shows us a peculiar people, too good for common superstition yet often lapsing into it. But the lapses are not characteristic. What are lapses in them are the faiths and traditions and customs of their neighbours. Even the great empires, Babylon and Egypt, from whom the Hebrews learned many points of true civilisation were nevertheless more superstitious. And if that assertion be challenged; if it is objected that the Record does not tell us how low and impure

the common life of Israel was; if the writers of the Bible are no fair sample of the masses: then we fall back upon our theme itself—"The Biblical Record." This Record itself is our direct concern. The Record itself has played a wider and more lasting part in the history of mankind than has the people wherein it rose. And this Biblical Record from first to last has been far in advance of its time and place. Each book was in advance of the time at which it was written. The whole is still in advance of the times in which generation after generation read it.

Think of the Hymn of Creation at the opening of Genesis, of the legend of the Flood, of many another fetched from Babylon, and how utterly transformed. Think of the four Gospels and the narratives of the divine Passion, then read the apocryphal Gospels of the second century and consider what inspiration has meant for the discipline of the mind of man. Consider the difference between the naïveté of the earlier historian in Judah and the profound reverence of his immediate successor in Ephraim, who learned in conflict with rampant idolatry so much of the Johannine doctrine that God is Spirit, and they who worship must worship in spirit and in truth. The Judean Jahvist is fresh and vigorous, no doubt. He has an epic charm. But read the story of Moses and the burning bush. No commentary is needed. Anyone can separate the strands in the English version by observing the distribution of the divine appellatives, God and The LORD. Notice how tribal theology, visible theophany, and all the roll of rhetoric are eschewed by the Elohist; and the gain in mystery and depth.

Pass to the Prophets. Think of Ezekiel brooding

on the baffling manifestation of God in cause and effect, and the stern necessity of retribution: the father's sin visited upon the children. Follow his meditative criticism of traditional dogma, as he puts over against it what he knows of God, the lover of men—merciful, compassionate, able to create anew. And so he begins to comprehend the miracle of grace which counteracts blind fate: "When the wicked man turneth away from his wickedness that he hath committed, and doeth that which is lawful and right, he shall save his soul alive . . . for I have no pleasure in the death of him that dieth, saith the Lord . . . therefore turn ye and live." Or the book of Job, where the same problem recurs with darker occultation. All that seems to be God, wherever the victim looks forth to find God, is against him: nature, science, creed, ancestral wisdom, the witness of the multitude, his own catastrophe. Yet he holds by his integrity. Conscience still speaks clearly and authoritatively. Conscience holds, though God betrays; or is conscience God? Is the real God to be found within? Immanence is gaining upon transcendence. The spirit of man is the lamp of the Lord.

Turn to the New Testament. See the progress of miracle. In the first three Gospels miracles are woven close into the story. They are its charm. Cut them out, or rationalise, and you spoil all. You do not wish to cut them out. These are no vulgar miracles, but flowers of love, trust, purity. You are refreshed by them as by out-of-doors Nature, and you will not treat them like a pedant. But that childlike enjoyment spoils if it be continued. And accordingly, when you pass to Paul's epistles, you find no more miracles of

the kind. There is one comprehensive miracle, the resurrection, and its issue, the gift of the Spirit, with new life for the faithful. At last, in St. John, that one miracle subsides into steadier truth. There is no denial, no deliberate correction. This evangelist is far from our obsession with the problem. He cares little for scientific theory or fact. Where light and life flood everything, and death is but the shadow of eternal light, it would doubtless seem but a very small matter that a man who had been four days buried should rise from the tomb. Nevertheless, he calls these events signs, not miracles. He repeats, heightens, weaves together wonder tales of the early Gospels in such manner as to make it plain that what he cares for is the inward meaning and not the outward fact. He leaves his readers free to believe in miracles, with large variety in their belief. He had his vision—they may have theirs. And so, when he comes to the Resurrection of the Lord, he tells the outward story as he saw the events by the inward eye of memory and art; but, before he tells it, he records that ultimate teaching of the Last Supper. Therein he makes clear that the essence of the resurrection is the rising of the incarnate Word to dwell in the heart of the disciples. Pure Spirit. All second bests renounced for the best of truth. Reasonable faith. A final Gospel that all men of goodwill may receive as easily as they might have received the integral Gospel preached and believed in Galilee.

All men—all truth—I am the way and the truth. Where and when truth ever appears it is one: it is the Gospel; it is, indeed, the incarnate Word himself. One of the unexpected reflections in Donne's *Devotions on Emergent Occasions* is that our Lord far oftener

describes himself as an idea than as a person. This universal quality of truth affects our civilising and simplifying conception of the Church, which is the body of the truth. A good metaphor that; yet simple truth needs no metaphor. The Church, as an army, or fortress, or city, has served the cause of civilisation often long and well. Sometimes the metaphor has clogged liberty and charity. To-day many watch with suspicion, some with hope, to see whether the Church will enlarge her heart and be again, as at the first, the friend of men.

So were they watching at the close of the apostolic century. And John observed the signs of those times; and the incarnate Word, new risen in his heart, interpreted the signs; and he used that authority to publish the interpretation. He will not repeat the title Church. He speaks abstractly of the communion or fellowship—a primitive term, as we gather from Acts. Paul had opened the gate to let the Gentiles in. John sees that there is no gate. The fancied walls dissolve: *smurava e non mirava*.

All is Spirit. The body is the spiritual body of the Lord. All sacraments burn out at last in pure Spirit; so, at least, this evangelist believes. The Church is the Spirit issuing into the world, which then lay wholly in evil. Yet the divine Light, too, was in the world, the Light that lighteth every man. The Spirit issues forth to find itself abroad, to coalesce, and purify, and rescue. To-day the world no longer lies wholly in evil. The Johannine gospel has not been ineffective during nineteen centuries. To-day the Church has a more immediate hope of spiritual success if it will venture to recover its unique originality.

Thus runs the Biblical Record. It shows divine reason casting out superstition, faith growing deeper as it grows simpler and more natural.

But it does also show something on the other side, or beyond. The Record opens with camels and tents: the nomad scorning luxury, pilgrim and sojourner with God in mortal life; and death means going to God with no question asked, no lust for reward nor fear of retribution, no bargain for persistence of self or continuance of temporary experiences. And throughout the Record this austerity lasts and dominates. God is; God's Kingdom is the end of all; God's righteousness is all that matters. One half of what is commonly accounted civilisation gets no encouragement from this Biblical Record. Man's life does not consist in what he adds to the bread which is sufficient for the day.

This is the faith of the artist also. The half is more than the whole. Only by that rule can he enjoy the prodigality of Nature, or translate the infinity of his own inner meaning.

And this is the secret of theology. Godhead is not found in complexity, cloud, and darkness. Godhead is revealed in ultimate simplicity. And the revelation and the essence are not twain, but one. This is the meaning of the Gospel and the Person of Jesus Christ, and his revelation of the Father, and the atoning sacrifice of his death. All simplifies to "God is love," and so does civilisation. Bastard civilisation may have no plan for suffering and death. But death at any rate can never be civilised away. The Biblical Record is ready to make the most of suffering too. Here it seems is princeliness, the only way for love to come quite by its own.

Of course this does not mean acquiescence in the suffering of others. "Bear ye one another's burdens," says St. Paul, "for each of us must bear his own burden." Generosity in the grand style is the very character of the personages of this record.

Abraham and Lot; Moses and his "Blot me out . . ."; St. Paul and his "Though the more I love the less I be loved"; Naaman and "Be content, take two"; the martyrdom of the Servant of the Lord; John Baptist's fulfilled joy, "He must increase, I decrease"; Zacchæus' royal penitence, "The half of my goods . . ."; "The Son of man came not to be ministered unto, but to minister, and to give his life a ransom for many"; and that other saying of the Lord Jesus, "It is more blessed to give than to receive." But quotation would be endless. An essay might be written on the princely spirit of the Bible. Such an essay would set the ethics of Christianity, its "poor in spirit" pattern, in a very noble light. In the long run this is the only practical morality. It has in itself the origin and goal of all civilisation: reckless renunciation making reckless generosity possible; "strange dash into reality"; "We know that we have passed out of death into life because we love the brethren."

V

CLASSICAL CIVILISATION AND
MODERN EUROPE¹

By H. J. ROSE, M.A.

(Professor of Latin, University College of Wales, Aberystwyth)

I WISH briefly to point out that the source of all that is most precious and most characteristic in the European civilisation of to-day is to be found in the *ancient* civilisations, as we somewhat absurdly call them, of Greece and Rome. Absurdly, for the beginnings of Greek history go back only some 3,500 years, a mere trifle in the long story of man; but the term is fixed, for the present at least, by usage.

What are the characteristic things in our culture which make it really worth saving and distinguish it from the cultures, in many ways admirable, of China and India, for example? Surely the recognition of the great doctrines that the intellect should be given free play, unhampered by preconceived dogmas; that the peoples of the earth have some sort of inherent right to exist, and are not, and should not be, simply the materials with which a ruler, whether king, priest, or dictator, works for his own or his god's glory; and that human life is sufficiently good to be worth living carefully, with some portion at least of the attention that an artist would pay to a picture, or a conscientious

¹ The original lecture was illustrated by slides, a list of which appears at the end.

craftsman to the completion of a machine. These doctrines, again and again obscured through one cause or another, but never quite forgotten, appear for the first time in history implicit in the minds of Greeks, and were destined to be carried abroad chiefly by the arms and commerce of Rome.

About 2000 B.C., and for a good while earlier and later, there existed in Crete a civilisation in many respects high. Excavations such as those of Sir Arthur Evans at Knossos have revealed to us the great palaces of its kings, something of its art, its material resources, its mysterious religion, its regard for sanitation and cleanliness. All this is excellent; but if we ask, "How did those Cretans live who were not kings or great nobles?" even Sir Arthur Evans can tell us little. A Cretan town consisted essentially of its palace; the people existed, so far as we can judge, for their (possibly divine) king. The conditions, that is, closely resembled those of an Oriental monarchy.

Greece was affected by this culture, which we call Minoan, in the second millennium B.C., the result being the civilisation which is generally styled Mycenaean, from its best-known site. Here again we find palaces, though of a somewhat different type, and stately tombs, but little to tell us how any but the great barons of this feudal system lived. In one respect the Mycenaean civilisation was a retrogression from the Cretan, for while the latter had a system or systems of hieroglyphic writing, the former shows but scanty traces of that precious art.

Upon this civilisation came what would seem at first sight a series of waves of barbarism. Long after the first shock had passed, when in the eighth century the

Dorians migrated into Greece, art had to begin anew, and much else with it. Slide 18 is an attempt at a work of art much later than the eighth century; its rudeness is at once apparent. But with this rudeness goes a clear sign of intellectual life. The childish artists have a system of writing which is by no means childish, for it is alphabetical, not ideographic. They fumble still in their expression, but they are fumbling to express that most difficult of subjects, the human body, and to idealise it.

If we look at one of their cities, when a little later their civilisation took on its characteristic form, we no longer find a palace and nothing else. The akropolis is still the centre, it is true, but it supports the temples of the gods, not the abode of any man; and we find cities whose centre is not the akropolis at all, but the agora, and in those cities houses of plain folk which are no hovels. The plan of the cities also improves and becomes scientific. Moreover, it is a people with ideals. Pictures are not the best medium for showing what is best shown in the immortal monuments of the Greek tongue; but a glimpse of their religious buildings will give a hint of how they thought, especially when we notice something of the same majesty in buildings not wholly religious, or connected in part with the popular amusements, or wholly with secular affairs. They were also a people of enterprise, as is shown by a thousand monuments, such as the home of galleys in which no slaves rowed (Slide 30).

Still more clearly is this idealism shown by their art. In one monument after another we find the oft-repeated tale of the antagonism between Greek freedom and Oriental despotism, or its native imitation. This group

(Slide 31) glorifies the slayers of one whose only serious fault was that he was not a constitutional ruler, but a *τύπαννος*—the very word is Oriental. More conspicuous still is the antagonism between Greek civilisation and order and the barbarism of the outside world; hence the popularity of the theme of the contest between Centaurs and Lapiths, and the many representations of beauty, of orderly worship and ritual, the joy in the free and developed human body, male or female, the sympathy with human feeling and human grief.

The basis on which this distinctively humanistic view of the world rested was the twofold one on which all sound education has ever since been recognised to rest, *mousike* and *gymnastike*. Technical training the Greeks, at their best, by no means despised; it is noteworthy with what respect Sokrates speaks of the craftsmen from whom he is fond of drawing illustrations; but they never made the fatal error of confusing it with education. Of the methods of Greek schools we do not know as much as we should like to know; but this much is certain, that they succeeded in diffusing at least elementary instruction far wider than it ever was diffused between the fall of ancient civilisation and the rise of modern ideas; witness the letter of a man on the very outskirts of the Greek world and in a humble position (Slide 45).

But the Greeks, besides their love of culture and learning and of all that makes life enjoyable in the best sense, had no little practical ability, although in this respect the Romans surpassed them. I have no adequate means of showing the progress of their applied sciences, notably medicine; but their commercial ability is well worth consideration. They did

not indeed invent the essential machine for extended commerce, coined money, but they used it early ; they soon brought it to a standardised shape which, characteristically enough, they preferred to make handsome as well ; they continued to make and use it after their political importance had ceased ; they popularised it in East and West alike ; and finally, they early taught Rome to use it, first in a clumsy form, and later in a much more handy one.

Rome's civilisation represents yet another shift of emphasis. The centre of the city is more definitely than ever the forum, and the most conspicuous buildings in the forum are secular, though the gods are by no means neglected. It is noteworthy that in the forum we find the cult of a new god whose recommendation was that he wished to be the benefactor of mankind in a concrete, political way, *Dius Iulius*. Closely allied with the forum is always the place for the people's amusement ; the forum is the centre of an Italian town, small or great. The road system spread this throughout the world, with the Roman thoroughness in supplying the necessities of life in a civilised and time-saving manner. We find Roman towns not only close at hand, as in Gaul, but in the far north and the far south, where now the desert has it all its own way.

Where peaceful penetration would not serve, arms and engineering skill helped civilisation forward. Where Rome marched, there, in her great days, she built and planted, using force where necessary until the barbarians yielded, for there were none but barbarians to fight. Hence it is no wonder that we find civilised ways and civilised articles, small and great, all over the world ; from feeding-bottles and padlocks, in once

barbarous Britain, to foreign gods made decently Graeco-Roman, and libraries of Western culture in Africa. And—this is no small point—it was Rome's desire that her barbarian subjects should remain, indeed, subject to her rule in greater matters, but in all smaller ones, govern themselves and fit themselves for world-citizenship. *Vrbem fecisti quod prius orbis erat.*

One little point by way of final illustration. We have seen Rome teaching the barbarian how to feed his babies; I close by showing how the comfortable and sensible Italian house was carried to the limits of the then known world and resulted, so far as Britain is concerned, in the most up-to-date erections we have yet seen.

SLIDES¹

1. 7999. Map of Crete.
2. 7381. View of Knossos.
3. 844. Excavation of throne-room.
4. 1492. View of throne-room.
5. 8312. Fresco.
6. 3812. Magazine with store-jars.
7. 5228. Hall of double axes.
8. 5522. Drainpipes.
9. 521. Drainage system.
10. 8240. Bath.

11. 5881. Orographic map of Greece.
12. 4225. Akropolis wall, Mycenae.

¹ The numbers prefixed to the titles of the slides are those which they bear in the Slide Catalogue of the Hellenic and Roman Societies (19, Bloomsbury Square, W.C. 1), by whom they were kindly lent.

- 13. 3322. Megaron, Mycenae.
- 14. 4239. Treasury of Atreus.
- 15. 5148. Cretan inscription.
- 16. 9814. Phaistos disc.
- 17. 4234. Clay seal, Mycenae.
- 18. 725. Dipylon vase, funeral procession.
- 19. 6650. Dipylon vase with inscription.
- 20. 2735. Proto-Corinthian fragments.
- 21. 9371 A4. Herakles and Triton.
- 22. 3614. "Artemis" of Delos.
- 23. 3615. Apollo of Thera.
- 24. 301. Athens, plan.
—and becoming characteristic—
—with shift of emphasis from king to gods and people.
- 25. 9803. Priene, plan.
- 26. 9805. Priene, house.
- 27. 5656. } Parthenon.
3004. }
- 28. 1923. Propylaia.
- 28a. 1956. Epidaurus, theatre.
- 29. 3135. Ephesos, gymnasium.
- 30. 5929. Munychia, galley slips.
- 31. 3635. The tyrannicides.
Hence idealistic Greek civilisation and interest in humanity—
- 32. 1348. Lapith woman and Centaur.
- 33. 4789. Lapith and Centaur.
- 34. 7122. Horse of Selene.
- 35. 4707. Group, east frieze, Parthenon.
- 36. 4734. Horsemen, north frieze, Parthenon.
- 37. 4843. Kalamis, Apollo.
- 38. 3682. Hermes of Praxiteles.

39. 7395. Aphrodite of Arles.
 40. 3703. Niobe and Niobid.

41. 7376. Athlete jumping.
 42. 1269. Athlete throwing spear.
 43. 6501. Umpire and athletes.
 44. 977. Music and reading lessons.
 45. C112. Soldier's letter, Egypt.

46. 2636. Early tetradrachm.
 47. 2613. Obol of Hippias.
 48. 5314. Athenian silver coin, fifth century.
 49. 4316. Athenian silver coin, time of Sulla.
 50. 8477. Himyarite imitations.
 51. 5375. Massilia, silver coin.
 52. B2180. Roman as and semis.
 53. B2182. Roman denarius, earliest type (third century).

54. B402. Forum.
 55. B412. Basilica Aemilia.
 56. B504. Altar of Julius Caesar.
 57. B294. Colosseum.
 58. B306. Pompeii, forum.
 59. B165. Viaduct on Via Appia.
 60. B510. Ponte Lupo.
 61. B49. Arles, Place du Forum.
 62. B46. Arles, amphitheatre.
 63. B523. Pont du Gard.
 64. B2509. Silchester.
 65. B6385. Timgad, general view.

VI

THE CULTURAL UNITY OF WESTERN
EUROPE

By J. W. HEADLAM-MORLEY, C.B.E., M.A.

MANY of you during your travels upon the continent of Europe have doubtless paused to observe and to study the relics of buildings and architecture with which the ground is so thickly strewn. In doing so you will have noticed throughout Western and the nearer parts of Central Europe a remarkable identity. Go where we will we find the same thing ; first the rude and formless structures of our nameless and barbarous predecessors, caves and dolmens, rude mounds of earth and lake dwellings ; everywhere these are followed by the massive and imposing structures which Rome erected. From the wild moors of Northumberland to the shores of the Mediterranean, in the frontier cities of the Rhine and the Danube, we see the stamp of a common dominant civilisation. And then, springing out of its ruins, the new forms of incipient Gothic Architecture, which in every country alike we can follow through its

1 stages, till once more in the fifteenth century we
2. gain emanating from Italy, the classical forms of
3. Renaissance, which give way in our own day to the
4. new mechanical devices—the ferro-concrete.
5. Inences of course there are : in Venice what
6. Byzantine influence is apparent ; nowhere but
7. Bologna we find anything comparable to our

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Perpendicular. But in broad and general outline we have in the most impressive way a reminder that all these parts of Western Europe have lived a common life, have been young and grown old together.

But as your steps are directed farther afield, as you cross the great rivers of Northern Europe or go down the valley of the Danube and over the mountains of the Balkans, the historic evidence changes. In the north you will notice the complete absence of one essential stage. Not only in Ireland and the Scandinavian countries, but also in the Northern German cities, at Lübeck and in Danzig, nowhere is there to be found the slightest trace of Rome. In the valley of the Rhine, throughout the whole of France and the Latin countries, one never can be far away from the consciousness of the Roman period, which is the matrix from which all later stages have sprung. In Cologne or Treves, that which is of the tenth or eleventh century already begins to wear the air of modernity ; in Danzig or in Cracow, anything before the fourteenth century is remote antiquity. And as you go still farther East new, strange and foreign elements intrude themselves upon you, the cupolas and minarets of Russia and the Moslem, but nowhere do we find anything comparable to the succession of the Gothic and the Renaissance. Here we find that our familiar formulas no longer serve us.

Now this architectural evidence is of great value, for it gives a clue, concrete, tangible, to be read by all, to what is a profound fact in the whole history of mankind. It indicates that which is the subject of my lecture—the truth that, from the larger point of view, Western Europe is a single area of its own which can only be understood, and the history of which can only

be written, if it is looked upon as one. Of such areas there have been others in the world's history. In the days of what we call classical antiquity we have the Mediterranean countries, when there was one common civilisation extending throughout the whole of Southern Europe, Northern Africa, and Western Asia, in which the protagonists were Egypt, Carthage, Greece and Rome. Then, again, we have, overlapping but still distinct from it, the area of the great kingdoms of the ancient world, Egypt, Babylonia, Assyria, the Hittites, in which also the nation of the Hebrews played a part so curious and individual. More remote still from ourselves there is India, and again China, each of them a complex of peoples with a history more or less common, and all of them constantly acting upon and reacting to the impulses and thoughts which emanated from each.

What I have already said indicates that the civilisation with which we are concerned originally belonged to a very limited and very definite part of the earth's surface. Having its nucleus in South-western Europe, in the district between Paris, Rome, and Barcelona, during the earlier and formative period it expanded over all the rest of Western Europe, so as to include within its confines the British Isles, Scandinavia, and Germany. It was confined, that is, to the district inhabited by what we call the Latin and the Teutonic races, to the district which recognised the authority of the Roman Church; originating within the frontiers of the Roman Empire, it was extended chiefly by the missionary efforts of the priests, first by the conversion of England, then, when the untamed Germans beyond the Rhine were converted to Christianity by English and Irish missionaries and forcibly amalgamated with the

Christian Empire by Charlemagne, they themselves became the channel through which in their turn, partly by arms and conquest, partly by commerce and religious propaganda, the frontiers of Western Europe were extended to the shores of the Baltic and the valley of the Vistula. To this day we can trace the farthest limits to which they advanced, in Budapest, in Prague, in Cracow, in Warsaw, Riga and Reval.

Racially, the people inhabiting this area were formed by the union of what we call the Teutonic and Latin races, but the expression "Latin race" does not in reality denote any community of blood, for what identity of origin could be found among tribes so far apart as the Latins of the Sabine Hills, the Gauls in the valley of the Po, the Seine and the Rhone, the Celtic tribes of Western France, the Basques and the Iberians? It is quite impossible to attribute such success as Europe has achieved, such energy as it has shown, to the inborn characteristics of what is called a pure-blooded race. All we can say is that it appears as though this very mixture of races produced qualities which were wanting in each one of them individually. If anyone would suggest, as many have, that the strength of Western Europe came solely from the dominant Teutonic conquerors, let us always recollect that it was among the mixed populations of Lombardy, Castille, Normandy and the Isle of France that the greatest achievements were produced, not in those districts of Scandinavia and the North of Germany where the Teutonic element exists unmixed and undefiled. Compare the unprecedented productivity of the Normans from the time when they settled in the North of France and were brought under the immediate influence of Latin civili-

be written, if it is looked upon as one. Of such areas there have been others in the world's history. In the days of what we call classical antiquity we have the Mediterranean countries, when there was one common civilisation extending throughout the whole of Southern Europe, Northern Africa, and Western Asia, in which the protagonists were Egypt, Carthage, Greece and Rome. Then, again, we have, overlapping but still distinct from it, the area of the great kingdoms of the ancient world, Egypt, Babylonia, Assyria, the Hittites, in which also the nation of the Hebrews played a part so curious and individual. More remote still from ourselves there is India, and again China, each of them a complex of peoples with a history more or less common, and all of them constantly acting upon and reacting to the impulses and thoughts which emanated from each.

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of all established institutions which transcended the bounds of the national state. We can see this process marked in the history of the most characteristic of mediæval institutions—the university. Originally, for instance, the University of Paris had an ecumenical character; it was organised to provide for all the nations of Europe, but in the fifteenth century we find Louis XI. inaugurating as a deliberate policy the nationalisation of the university. It was an action which has had many imitators since; it was the beginning of the time when learning and culture were to be subordinated to the political interests of the State. The multiplication of universities throughout Europe tended in the same direction towards their nationalisation, and we see the same phenomenon when the national spirit of Bohemia brought about the expulsion of all the German students from the University of Prague.

This dissolution at home was accompanied and followed by an enormous expansion abroad, an expansion which has reached its culminating point in our own days when we find that the common Western civilisation has done what no previous civilisation ever succeeded in, established its power over the whole globe. But all outside this original homeland is foreign conquest; and other races, though apparently assimilated, still remain alien. I see no evidence that anywhere outside its original sphere our civilisation could really live and grow if divorced from its true home or if entrusted to other hands. Not only the black and the yellow races, even the Arab and the Turk and the Slav may become willing pupils and capable imitators; but is there anyone who does not in his heart of hearts believe that if

sation, with that of their kinsmen who remained in their northern home, or that of the Danes who settled among the English.

The story of this Western Europe seems to begin more than a thousand years ago in the time of Charlemagne, and if we are to look for some great figure to stand at the beginning of our common history, it is in him that it must be found, for he was the symbol and instrument for welding together the two rival forces of the Roman world and its Teutonic conquerors; it was he and his co-operators at Rome who began the formation of the great institutions by which the society was to be built up. The history of this society falls into two great periods. During the first—the formative period—which we call the Middle Ages, Europe was a small, sparsely populated country, struggling to maintain a precarious existence against external attack, and just for this reason acutely conscious of its own unity. This is the time when, under the influence especially of the Church, a common faith, common ecclesiastical institutions, to a large extent a common language and a common law, the varied tribes and people by whom the country was inhabited were welded together in a common form. And then there comes the new age beginning with the Renaissance and the Reformation, the notes of which are expansion abroad and dissolution at home. The dissolution at home coincides with, and was a consequence of, the final establishment of independent states which enjoyed within their own domain absolute sovereignty. With this came also the revolt against the common authority of the Church, the final assertion of the local dialects as the medium of government, of education and of culture, and the repudiation

government and who, to its disadvantage, contrast the history of Europe with that of imperial Rome, or at the present day of the United States of America. There are many, from the days of Dante onwards, who have longed for that ordered government which might appear to be the true reflex and instrument of divine providence. How often do we hear it said that if on the soil of America, English and Italians and Poles and Ruthenians and Germans and Scandinavians can all live side by side in peace and contentment, why should they not do so in their original homes? I have not to-day to discuss ideals of the future; we are concerned with the past, and all that we have to do is to note the fact that this anarchy, this warfare, this rivalry, existed just at the time when the energies of the Continent were at their highest. Let us note also that the energies of the Mediterranean world, the vital force, artistic spirit, intellectual ingenuity, seems gradually but steadily to have decayed, and that the beginning of the decay coincided with the establishment of a common government. May it not be that the friction and disorder was not in reality merely destruction of energy, but the cause by which the energy was produced?

But though there was to be no common government, none the less we find that all the Western European peoples have passed through a common political development. Their institutions, if not identical, have been similar, partly as the result of a spontaneous and natural growth in each country, partly by the reaction of one country upon another. And so we find that the whole Western world has become a great laboratory of political experiment. The free communities of Northern Italy and Flanders; the federal experiments of the Swiss

they were left to their own unaided efforts the European culture which is springing up among them would soon wither and die like a plant removed from its native home? And we may well doubt whether even the purely European colonial expansion would be able to maintain its characteristics if cut off from constant intercourse with the mother continent.

Now in our analysis of this culture the first great fact that we will notice is that though undoubtedly there is a common history and common civilisation for all Western Europe, the people were not joined in any formal political union, nor has the country ever been subjected to one common government. For a moment indeed it looked as though Charlemagne would establish his authority over the whole area; that hope, as we know, was to be disappointed; his attempt to create a new empire failed, as all subsequent attempts have failed. Again and again attempts were made by the later empire, by the rulers of Spain and France, to unite the whole of Western Europe in one great state or empire. Always we find the same thing, the appeal to local patriotism and personal liberty inspires a resistance which breaks down the efforts of every conqueror. And so there has been as a permanent characteristic of Europe that which critics call anarchy; for the absence of a common rule means struggle, fighting and war, a ceaseless confusion between rival units of government for territory and predominance. This is a condition which to many is very shocking. Undoubtedly it implies a great expenditure of energy, a great destruction of wealth, at times a great loss of life. There are many in consequence who would have preferred to see the gradual establishment of some common

between the English-speaking world and the European state so difficult as the fact that here in England, and across the seas in America, our lawyers have been trained not primarily on the Roman, but on the English common and statute law. But there was something more than this. What Europe derived from Rome was not merely a single code, it was the very conception of law—law as the basis of government and the framework of the State. All the political thought of the Middle Ages is indeed ultimately based on the belief that there were somewhere or other in existence general principles of law which were equally applicable to all mankind, and that it was the function of each territorial government to frame its own particular and local laws in accordance with these universal principles. From this we get the conception of the union of authority and justice; but justice alone does not fully express the scope of the idea. The Turkish Kadi, when plaintiff and defendant appear before him, will, if he is a good man, attempt to give a just decision on the case at issue. But in general this decision will be one not in accordance with general and recognised principles embodied either in a code or in previous decisions; it will be spontaneous, accidental, impressionist, intensely human, the application of one man's judgment to a particular difficulty; it will take into consideration the character and circumstances, and may easily be more in accordance with justice than a decision based on written and recognised principles. But just for this reason it is not and never does become part of a great system built up by the co-operation of succeeding generations, and for this reason it is very different from the law as the basis of the administration which

and the Dutch ; the essays in representative government of Spain, of France, and above all of this country ; the highly developed centralisation of the French monarchy, empire and republic ; the idea of the philosophic monarch embodied in Frederick the Great and Joseph II. ; the theocracy of Geneva and of Scotland—all existed side by side, all contended with one another for supremacy, and it is from the comparison and struggle between them that in the process of the centuries we get that great development of political thought by which the work of Aristotle has been continued and his methods applied to phenomena of which he had no conception. And again, underlying all this exuberance of experiment, the changing ideals, conflicts, and revelations which make up the political history of Europe, we find as a fundamental basis certain conceptions which are always maintained and the close adherence to which seems more than anything else to differentiate Europe from the rest of the world. These I would sum up in the expressions law and territorial sovereignty. The two are indissolubly connected, for without territorial sovereignty there can be no permanent and effective law.

Under the heading of law I should include not only the actual text of the Roman Law, the Digest, and the Institutions which became a special subject of study in the Universities of Europe, and the authority of which gradually superseded that of the barbarian codes and the native unwritten laws and customs. It was indeed a matter of the greatest importance that throughout the greater part of the Continent there was a common law based on the study of common authoritative works, and to this day nothing makes co-operation

ecclesiastical and legal institutions. It seemed for a time as if Latin would eventually permanently become the common language. But even from the beginning the vernacular in each country was holding its own against Latin, the use of which was confined to the ruling ecclesiastical and official classes. In England, perhaps better than anywhere else, we can trace the rivalry of the two organs of expression. Eventually the pressure from below overcame the resistance above, and in each country the native language established first its complete equality, and secondly, a superiority over Latin, till we get to the time when, even for the purposes of learning and international intercourse, Latin disappears from use.

But it does not follow from this that there was a complete anarchy. The medium of international communication was no longer one, but some three or four different languages. These languages in structure and in vocabulary have so much in common with one another, the use of them was so easily acquired, that we may say that they were merely dialects, through which the common ideas and common thoughts found a varied expression. No one of them lived an independent and separate life; new thoughts and ideas, tricks of style and expression, the most daring innovations in poetic form, the most subtle distinction in philosophic terms, the most delicate suggestions of rhyme and rhythm, inaugurated maybe in France or Italy, or England or Germany, quickly found their way round the Continent, and awakened an echo in each country. While, on the other hand, the very fact that Europe, thinking as a whole, expressed itself in various idioms provided a safeguard against that danger to which even

in whatever part of the Continent it may arise, passes rapidly from country to country; in each place it assumes new forms and develops fresh characteristics, and this it is which insures the constant presence of the critical spirit which prevents any one thought or idea overshadowing all else; again and again we find the attempt to establish a formal unity, which eventually fails, and gives place to what at first sight seems a purposeless anarchy. But always we find that underneath the conflicts and struggles there remains a fundamental unity of thought and idea. It is a truism that more than anything else it was the Church by which the civilisation of Western Europe was built up. And indeed it seemed for many centuries as though in the Papacy would be found the force to which all Western Europe would be permanently subjected. But we also know how this attempt at creating a common sovereign failed, and that, though the ecclesiastical system was overthrown, there still remains the fundamental conception of Christianity, the inestimable and equal worth of each individual human life, from which, purely irrational as it seems to be, it is impossible for us to divest ourselves. Under the visible conflict of Catholicism, Protestantism, and Free Thought this remains a common factor, which brings them nearer to one another than is any one of them to any of the religions of Asia, the superstitions of Africa, or the brutal negation of all moral obligations or human feeling of the Mongol.

And as it is with law and religion, so it is with language. At the earliest stage the existence of a common language throughout the whole of Western Europe alone made possible the building up of common

were indeed no limits to the ambitions of the earlier empires. The rulers of Babylonia and Syria, of Persia and Macedonia, the apostles of Buddhism and Mohammedanism, went out to expand their sway and to convert to their faith all other nations of the world. But in every case hitherto had they failed. Rome itself never extended far beyond its Mediterranean home, and with sublime insolence the expression *orbis terrarum* was used to designate the limits of the Roman Empire. Even Christianity in its earlier days never established itself far beyond the limited sphere of the Empire, and failed to create in fact that common brotherhood of man which was its very essence. But Europe in our own days has conquered the world, and by conquering the world has invented humanity; for the first time in history the human race has become conscious of itself. We hear much now of universal history, and every book or lecture published on the teaching of history includes an exhortation that the basis of our work must be the history of humanity. It is only now that such a conception would have been even possible, for, after all, what do we mean by writing the history of any number of men or women? We can only do so if there is some real connection between them, if they form part of the same community. We can write the history of England, we can write the history of the Mormons, we can write the history of the Inquisition, of the Papacy, of the game of golf or of philately, but we cannot write a history of humanity as a whole unless humanity is brought together into one great community. I do not mean by this necessarily that it should be brought together under one government or into one political society. We can write the history

Greece succumbed, and which must arise everywhere where men are monolingual—the danger of confusing words with thoughts. At the same time it retarded the degradation of language itself. The over-refinement, for instance, of the French language, on the one side by its example, corrected the native faults of German and of English; on the other hand, when it threatened permanently to weaken, not only French language, but French thought, was corrected by the incursion from over the border of a wave of Teutonic thought. Nothing could be more lamentable than the attempts which are from time to time made to correct and check the reciprocal influences of European languages upon one another. We do not want to close our doors to what we may learn from France or Germany. What could be more childish than the efforts of German patriots to degrade their language from being one of the general European forms of expression to being a purely national and local organ?

But if Europe has for these reasons profited by the variety of languages which she has used, this advantage would be lost if we were to plunge into the other extreme; with some three or four languages we can get along, but clearly the essential unity and mutual understanding would disappear if an equal place were to be assigned not only to the great Slavonic languages, but shall we say also to Magyar and Erse, Lithuanian and Latvian, Bulgarian and Czecho-Slovakian, Finnish and Ukrainian?

This Europe has in our own time embarked upon the last and greatest adventure; it has done what no previous civilisation ever succeeded in doing, and has established its power over the whole globe. There

Europe has imposed itself upon the world. The immediate method by which it has done so has been the enormous physical power which is attained through the new control over the forces of nature. The conquest of the world has been achieved by gunpowder, steam and electricity. But there is another question which we must confront. What is it that Europe gives to the world by the government and control which it has assumed? This is a question which the historian must ask with regard to every great conquering civilisation. We ask it about the Mogul conquest of India, the Arab conquest of Africa, the Persian conquest of Asia, the Roman conquest of the Mediterranean. In most cases the answer is very unsatisfactory. The peoples and nations which were subdued gained from their subjection nothing but the peace and order which was implied in their common subjection, and even this was temporary and precarious. We cannot attribute any but the slightest permanent progress to the fact that the Lydians and Syrians became for the time the subjects of the great King. Nor have the Arab conquerors of Africa left as a memorial of their sway anything which can be looked on with satisfaction. With Rome, indeed, it was different, and it is just for this reason that the influence of Rome for so many hundreds of years outlived its actual physical power and that Rome became a tradition long after it had ceased to be a fact. For to the Gauls and the Spaniards, the Balkan tribes and the Greek cities of Asia, the Roman Empire brought something which they had not known before, and the memory of which has never been effaced. In particular it brought the conception of law, recognition of permanent principles which were no

of Western Europe, though it did not form a political society. We can do so because of the innumerable bonds between men which are not included in government. But we cannot write a history of Western Europe and of China in the same work. We can indeed write two separate histories and bind them in one volume, and include in it tracts on the history of India and that of the Bantu races, of the South American Indians and the Dyaks of New Guinea; but none the less we shall have no history here in any reasonable sense which we may give to the word, because throughout the greater part of their existence these different tribes and peoples lived their own life, completely independent of one another. There was no community between them; there was not even action and reaction. All that we can say is that perhaps from time to time some great wave of pestilence, the black death or the plague or influenza, took its sombre course round the world, reminding all nations of the world that they had at least a common physical constitution.

Not until the different nations were brought into immediate contact with one another, until they became aware of each other's existence, traded and fought and struggled with one another and learned ideas from one another, did there arise a condition of things which is capable of connected treatment and analysis. The fact, indeed, is that any common treatment of the human race as a whole has only become possible during the last few decades, for it is only during this period that the human race has become, or perhaps we may say is in the process of becoming, conscious of itself as an identity.

longer by the spirit of Francis of Assisi, but one the apostles of which are Krupp and the A.E.G. and the Shell Oil Company. It is a point of view natural enough if we look merely at the Europe and the world of to-day, and a point of view easy to adopt by those who are brought into our European culture without that instinctive understanding of its earlier history and its inner life which is the prerogative of those alone to whom participation is an ineradicable birthright. It is a view easy enough to hold, even by some among ourselves, and forms a suitable subject for satires on the civilisation based on steel and gold. I would venture to suggest that it is a view very partial and very incomplete, and that even our own age could not, though it would, divest itself of its own spiritual ancestry, and that if we would really understand our own civilisation, we must inquire not merely of the particular aspect which it takes in our own days, but those common qualities which it had exhibited from the earlier centuries, and ask what Napoleon, Mr. Rhodes, and Herr Stinnes have in common with Benedict and Abelard and St. Dominic.

To this question the answer I should suggest would be: Energy, co-ordinated energy! That seems to me to be, in truth, the main characteristic of the Western world. There are many who would attribute the great successes, scientific advancement, and political progress of the last three centuries to the working within this society of the spirit and the heritage of Greece and Rome. They would place their finger on that stage which we call the Renaissance, they would point out to us that the Renaissance meant the re-awakening of the intellect under the stimulus provided by contact

longer merely the customs of the individual tribe or city, but universal and vindicated by the full authority of the absolute government. Law was that which the nations gained as a price of freedom. It brought also eventually, by what might appear as an accident, Christianity. Whether or not this law was a sufficient compensation is, indeed, a problem worthy of the study of historians. I am not myself disposed to acquiesce in the complacent view which is usual, but which Mr. Wells has challenged.

This work of conquest has indeed a double side; partly it has been achieved by force and violence, but side by side with that has gone on a process of intellectual absorption, so that more and more the other peoples of the world have, however unwillingly, submitted themselves, not only physically, but also spiritually, to their conquerors, and their highest aim seems to be the admission into the system as full equals and participants. Even in the moment when some of them struggle against it, they can only do so by becoming Europeanised, and it is from Europe itself that the Turk or the Ethiopian or the Japanese or the Chinese must derive the arms by which they assert their independence of Europe.

But to those who stand as outside and often antagonistic observers, what aspect does this European culture present? Almost necessarily it is that which even among ourselves holds the first place at the present time—technical skill founded on scientific investigation. It necessarily appears to be a society which is in its essence occupied with materialistic and mechanical things, which aims not at beauty but at wealth, not at truth but at success, one inspired no

navigators, the conquistadors in South America, the English seamen—half pirates, half traders, half missionaries of Empire—followed in our own days by the more intellectual and scientific explorers, whose physical energy was subordinated to the pursuit of knowledge, the spread of the gospel, and the acquisition of wealth.

And side by side with this physical energy we get equal energy in spiritual and intellectual matters. Think for a moment of the enormous expenditure of intellectual power, which went on for three centuries in the scholastic controversies and the building up of the great system of mediæval thought. Just at the same time others with equal vigour were creating new forms of artistic expression, building castles and cathedrals, painting pictures and frescoes, elaborating the luxuriance of ornament; and then again energy, similar in character, was turned suddenly into a new channel, and began the investigation of the secrets of nature, which has been pursued with unremitting industry to our own time. And all this purely intellectual work was not confined to the cloister, the lecture room, or the laboratory; every advance in knowledge, every new speculation on the nature of society or of religion, at once found others who would apply it in building up new forms of human society and co-operation—the religious orders, the universities, changing political institutions, the free cities, the new monarchies, and then, again, the revolution and democracy.

Energy, individual and yet co-ordinated; and the co-ordination was made possible by that which seems to me one of the most marked products of our civilisation—namely, the establishment of institutions.

with Greek thought. Far be it from me to underestimate all that we have learned from Greece. But I cannot but think that after all this is not the essential thing. We have to ask the question, Why was it that modern Europe absorbed and made its own the heritage of Greece, and, using this as a starting-point, passed on to achievements which in some spheres far surpass all that Greece did? Let us also not forget that our history did not begin with the Renaissance. When this world of ours had only, first Rome, and then the more imperfect Arabian culture from which to learn, it seemed even then to have an alchemy to turn to its own uses, to absorb, digest and grow.

For after all, what is the special distinguishing mark of this civilisation? Surely we must recognise that it is not one definite and limited teaching or formal union; on the contrary, that which we notice in it is variety, versatility, and, above all, vital energy—energy directed not by some one controlling authority, not tending always in one direction, not with any constant purpose, but energy always breaking out in the most varied and inconsistent forms; physical energy shown in the constant internecine struggles at home, both between rival countries and within each country, the spasmodic, the reckless squandering of life in what often seem purposeless rivalries. With this the whole of mediæval Europe is filled—the quarrels of the barons against the kings, of the barons against one another, of the territorial rulers against their suzerain, of the Italian cities with one another. And then this physical energy was diverted to other fields, to the voyages, to the explorations, to the conquests abroad. The explorations of Venetian, Portuguese and Spanish

fined to any one country, but spreads throughout the entire continent, that the whole fabric of modern science has been erected. Even the greatest explorers have not stood alone—Copernicus and Galileo, Newton, Pasteur, and Darwin ; their work could not have been done, and would, even if done, have been lost and dissipated if it had not been based on that of their predecessors, and unless it had been carried on by countless numbers of smaller men who were working together in the universities, the schools, the institutes and societies, the ramifications of which are spread over all Western Europe.

But it is the characteristic of this energy that it is as freely used in destruction as in creation. No sooner has the great fabric of the mediæval Church been built up, no sooner have the metaphysical speculations been organised in a coherent system, than there arises within the society itself a spirit of rebellion which quickly wins the upper hand, and we find men devoting themselves, apparently careless of the consequences, to pulling down and destroying all that their fathers had created. The monasteries were rased to the ground, the institutions were dissolved, the books and parchments were torn up, burned, and scattered to the four winds ; but in the very moment of destruction a new creation was beginning. But this new creation was destined also, just as did the old, to breed within itself men who in the same way set out to erase it from the earth. The great system of organised monarchical government must be destroyed by the revolution, and in our own days we are able to watch how that which sprang out of it—what has been called bourgeois and capitalist society—that system which in this, our own country, we call

As a distinguished historian, whose death we all deplore, has said :

“ Ideals pass into great historic forces by embodying themselves in institutions. The power of embodying these ideals in institutions was the peculiar quality of the mediæval mind.”

In fact, it was these institutions which even to the present day give its vital strength to the civilisation of the Western world. Some indeed, for the time the greatest and the most strenuous, the peculiarly ecclesiastical institutions of the religious orders, have waned away. But how great are the others which remain ! The representation of the people in estates which is the origin of parliamentary government, which is now spread throughout the world, was essentially a mediæval institution. And then we have the schools and universities, the societies of lawyers, the guilds of physicians.

But in truth this characteristic belongs not only to the mediæval period. Under other forms it is continued to the present day, and it is now working actively among us. For what is an institution ? It is an organisation created by spontaneous energy by which the individual members are enabled to work in co-operation with one another. The result is that the work of each individual is no longer isolated, spasmodic, and ephemeral, but is co-ordinated with the work of others and the results perpetuated. Each man consciously works not for himself alone, but for the generality, of which he is a part. He starts not *in vacuo*, but continues to build up what has been begun by his predecessors, and his own contribution, however small, itself becomes a permanent part of a growing structure. It is on this collaboration, which is not con-

rejected as soon as it was completed, for the mind of Europe refuses to rest on structures so fragile and fantastic. But if it rejects each philosophy in turn, it is because nothing will turn it away from the pursuit of truth.

Restless energy, purposeless activity—to the contemplative and philosophic mind this gives in itself no satisfaction, and the question would always arise, What is the object? Where does the road lead? And the challenge comes to us not only from among ourselves, but from the half-assimilated external world. Tolstoi and Dostoievski give expression to the repugnance of the Russian peasant and his revolt against the alien system to which he is being subjected, and the same challenge comes to us from the mud huts of the Indian village, from the Turk and the Ethiopian, who try, perhaps in vain, to assert their independence. It is a challenge which cannot be ignored and to which the European will at this moment give the answer in the word "progress," the last illusion of the optimist who by the fabric of his own mind attempts to explain and justify the events by which he is surrounded and in which he is an actor. Progress—what does it mean? All that we think and do, achieve and suffer, is of value, not in itself, but merely as a stepping-stone to something unknown and unknowable which will take place in the far future, when men will look back on our own age with the academic interest with which we regard the lives of our own predecessors. The virtue of our own actions lies not in themselves but in their result, and the result will often be the opposite of that which we have intended—a creed which might easily become

the Victorian era, with all its careful adjustments, its stability, and its comfort, is being eaten away, and is falling bit by bit to the ground, to make way, doubtless, for some new creation.

Now this element of destruction is not accidental. Repulsive as it is to the orderly and careful man, it was this which has prevented our civilisation from succumbing to the lingering death which has overcome all similar civilisations. We can easily see how, if the mediæval system had firmly established itself so that it could not be overthrown, the life would have gone out of it, and it would have been, as it was rapidly becoming, no longer an inspiration for thought and action, but a dead and cramping prison, which would have destroyed all initiative and spontaneity. We can see how the most excellent administration of the new monarchy would, by the very virtue of its efficiency, in the same way have destroyed the hope of political freedom. We can see, though perhaps less clearly, the similar dangers inherent in the system in which many of us were brought up. In truth it is this energy of destruction which has preserved alive the desire of advance and of progress and has saved our civilisation from the fate which has overcome that of countries such as China, Egypt, India, or the great empires of Asia. It is to this quality that we owe it that Europe has no definite and concrete system of philosophy to offer to the world. It has indeed had innumerable philosophies, each of which has for a brief moment claimed authority. You know the names of their authors—Descartes, Spinoza, Kant, and Hegel—the utilitarians, the materialists, and the mystics—but each has been

VII

THE PROBLEM OF POLITICAL UNITY

By RAMSAY MUIR

WE live in a wonderful age, in which the future destinies of humanity are visibly being determined before our eyes. It is an age of great events ; but it is also an age of men too small to dominate the stream of events, along whose current they are swept like straws. We are winning for man the mastery of the forces of Nature with a speed incredibly greater than any earlier age has known. But we are winning this mastery by means of an intense specialisation ; our most powerful minds are devoting themselves mainly or wholly to the study of isolated aspects of the realm of knowledge, and to the practical application of the knowledge they obtain, without striving to relate their work to the whole movement of civilisation. There are but few, and these not of the first rank of intelligence, who give the whole power of their minds to the attempt to understand whither we may be going, or to guide the direction of this movement. That is why, ten years ago, we found ourselves flung suddenly over the greatest cataract in human history without appreciating what was happening ; and as we struggle breathlessly with the rapids in the dark gorge below the cataract, we find it more difficult than ever to answer the question, Whither ?

I want to ask you to think for a little about one of

analogous to the fatalism which we look on as a characteristic of the East, for by it we find ourselves fated to be the instruments through which the world spirit produces an evolution, the end and purpose of which is and must be completely hidden from ourselves.

tion which will express the common needs and serve the common interests of the whole human race. Even the formation of such an ideal would have been impossible a hundred years ago. Then the most daring minds conceived of nothing wider than the unity of Europe or of Western civilisation. They could not have done so, for a great part of the world was then still unknown, and a greater part was as yet scarcely touched by the ideas of Western civilisation which have, however superficially, been spread over the face of the globe during the course, mainly, of the last half-century, since the conquests of science put into the hands of the Western peoples resources such as neither they nor any other race of men had ever commanded before.

It would appear, then, that we have reached a sort of turning-point in the affairs of man, and it becomes us, at a moment so solemn, to look behind and before, and to ask ourselves what is likely to be the outcome of this amazing development. That, I take it, is what you mean me to do when you ask me to discuss "the problem of political unity."

First of all, let us ask ourselves how it is that this development has come about so rapidly. Very obviously, it has been due to the conquest or domination of the non-European world by the European countries and their civilisation. This has been the work of four centuries of what is called "imperialism," which have brought about the creation of the group of vast world-empires that were the main participants in the world-war; the last generation, from 1880 onwards, saw the culmination of this secular process in the partition of Africa and the Pacific, and in the division of a great part

the most marked trends of human affairs. Humanity does seem to be definitely moving towards some sort of political unity. Even the Great War, which in one aspect seemed to afford so horrible an illustration of the disruptive, destructive, disuniting tendencies of Man, was itself, in another aspect, a very striking proof of this movement towards unity. For it was the first event in human history in which every people on the face of the globe was demonstrably, and for the most part consciously, concerned. It was a terrific proof of the fact that the whole round globe has become, in some sense, an economic unit and a single political system. A shot is fired in the uplands of the secluded and little-known province of Bosnia: and behold! all the peoples of the earth, the islanders of the Pacific, the negroes of Central Africa, the farmers of New Zealand, the tribes of the Himalayas, find themselves drawn into the vortex of a titanic conflict, and know that their fate depends upon its issue. Never before, in all human history, has there been such a clangorous demonstration of the inter-dependence of all the races of men.

And the first outcome of these world-shaking events was the foundation, in the League of Nations, of the first organisation which has ever been created to deal with the concerns of the whole human race. Whatever you may think of the League—whatever view you may take of its prospects of realising the gigantic ambition it has set before itself—this at least everybody must admit: that the creation of such an organisation, not by dreamers and idealists, but by practical politicians, is a sensational proof of the rapidity with which we have moved towards the general acceptance of the conception that there ought to be some political organisa-

deny that the establishment of the Roman Empire, which gave a common basis to the variant national civilisations of Europe, and which made respect for the majesty of law a common possession of the European peoples and their descendants, shared in the same degree by no other peoples on the earth's surface—will anybody deny that this immense achievement marked a very great advance in human development? Yet it was due, almost wholly due, to the exercise of force not guided by any considerations of altruism. Again, will anybody question the value of the process whereby England was welded into a united nation out of the chaos of the Heptarchic period? Only the use of force by ambitious kings achieved that end; or the corresponding processes by which France, Spain, and other European countries were welded into unity.

In the last generation we saw two great nations unified in Europe, and enabled, by that unification, to make their distinctive contributions to the common stock effective. Both Germany and Italy owed their unity to the unflinching use of force. There is nothing to be gained by glozing over these plain facts because our sentimental souls don't like them. Almost every stage in the advance towards political unity has been due to the exercise of force.^w Even the apparent exceptions have been the kind of exceptions that really do prove the rule. The union of England and Scotland was brought about without fighting; but behind that union lay centuries of strife, and the expectation of a new conflict was one of the strongest motives which influenced the conclusion of the agreement. The thirteen American colonies united without coming to blows; but it was war with the mother-country and the expec-

of Asia, and the threatened division of China, into "spheres of influence" for the chief European Powers. There are a great many people who are content to condemn this forcible expansion of European civilisation as being, in itself, wholly evil, and to say no more about it. Such people, being sentimentalists—that is to say, being unwilling to acknowledge the validity of facts which do not accord with their hypotheses—are loth to admit that a process in their eyes so vile as military conquest could possibly contribute to an end in their eyes so admirable as world-unity. But it is our business as historians to accept facts and be loyal to them. No honest student can deny that the inchoate and rudimentary world-order which we see to-day beginning to shape itself has in actual fact been due to the conquests of the European peoples, to their "imperialism," and, in the last resort, to the exercise of brute force by more highly developed and energetic peoples over more backward or stagnant peoples.

And that is not all. If we are going to be honest, we shall have to recognise that every stage in the advance of human society from tiny, primitive tribal units to cities, nations, or far-spreading empires has in fact been due, with only rare and merely apparent exceptions, to the use of force; and that while in multitudes of cases these forcibly established dominations have led to no good results, and have therefore been short-lived and evanescent, like the empires of Attila or Genghiz, in other cases their consequences (by whatever cruelties, injustices, or tyrannies they may have been accompanied) have in the main been good, and have permanently influenced the course of history for the better. Will anybody

splitting off of the new little states that have been formed out of the Austrian Empire and out of parts of the Russian Empire. Even within the new states, you see it in the readiness of sections of them to revolt against the domination of the more powerful elements which have gained control of the government. The Slovaks are restless under the dominion of the Czechs; the Croats are unwilling to be ruled by the Serbs; the Catalonians are reviving the memory of their one-time independence of Castile. Everywhere, all over the world, nationalities, often quite small nationalities, are insistently claiming "self-determination"; and there are many who feel that the feverish nationalism of to-day is the greatest obstacle to peace and to political unity.

Here, it would seem, is a force definitely in conflict with the movement towards wider political unity—a centrifugal force, which balances the centripetal force. And the notable thing is that, as a real factor in public affairs, it has been vigorously at work throughout the period of Imperialism, during which the great European empires have been built up. It has been just during the four centuries of Imperialism that the rivalries of nation-states have dominated the history of Europe; and the last and most frenzied period of Imperialism has nearly coincided with the period of more intense Nationalism that began with Mazzini. If it be true that Nationalism is eternally in protest against Imperialism, because a people that is proud of its nationhood refuses to accept subordination to another nation, it is also and equally true that Nationalism is the mother of Imperialism, since it is the pride of nationhood that impels a whole people, and not merely

tation of conflict among themselves that drove them to subordinate their particular velleities.

Not a doubt about it: force, or *the fear of force*, has been the cause of every advance in political unity in the past. What are we to conclude from this? That only brute force can give reality to the larger unity, which we now see taking shape? This would be an illegitimate conclusion; though you will perhaps permit me here to observe that it is, in fact, the fear of future force which even to-day gives most of its vitality to the League of Nations. But, in truth, even if we admit (as we must) that force has always in fact been at work in the transformation of a smaller into a larger political unit, it is not necessary to conclude that it must always be so, or, at all events, that force need always be exercised in the kind of forms with which we have been familiar in the past. It is always possible that other factors may be at work in human society which may tend to modify the working of what have hitherto been the normal movements of human society.

And here let me ask you to allow me to diverge sharply to another aspect of my subject, not so remote from my first theme as may at first sight appear.

Has it not struck you that alongside of the movement towards a wider political unity which we have noted as one of the most marked features of our time, there is also at work what may seem an almost contrary movement, a disruptive movement, the movement of Nationalism—the claim of peoples who are conscious of their own distinct identity to live apart in their own way, and to govern themselves? We see this tendency at work in Ireland, in India, in Egypt, in the growingly intense national feeling of the great Dominions, in the

Here, then, you have two great movements of Modern History which seem, on the surface, to be irreconcilably antagonistic to one another—the one a centripetal force, a movement towards greater unity, expressing itself first in imperialisms and ultimately in the organisation of the League of Nations: the other a centrifugal force, expressing itself in movements for national independence and “self-determination”; the one a demand for order, for the centralised regulation of greater and greater political units, and ultimately of the whole world: the other a demand for local freedom, for government only by the consent of groups of people who understand and share one another’s points of view. Can these apparently hostile forces be reconciled, or are they to be regarded as eternally in conflict? If we are to take the latter view, then the outlook for humanity is a bleak one. But is it fanciful to suggest that both may be equally necessary for human progress, just as the centripetal and centrifugal forces in the solar system combine to keep a group of worlds in incessant motion and life, yet in an ordered relationship one with another.

I do not think we need despair. For happily there exists in the world one state or group of peoples which exhibits these apparently conflicting forces resolved into at the least a partial harmony, and continuing to preserve, at peace with one another, an infinitely diverse commonwealth of peoples, each of which follows its own mode of life and enjoys a real degree of “self-determination,” yet all can and do continue for the common advantage. The British Empire may fairly be described as the supreme product of the imperialist movement. Created, in the main, by force, it includes

a conquering prince, to impose its dominion upon other peoples.

Our friends the sentimentalists, who hate Imperialism and will not admit that it has led to any good, hate also Nationalism. They will not recognise that both are facts, forces, in human affairs, which it is as foolish merely to condemn and to refuse to study as it would be to condemn or refuse to study the tides. Just as they will not see that Imperialism has brought us nearer to the unity of mankind, so they will not see that Nationalism also has been a very potent creative force. It has, indeed, been very closely linked with the demand for self-government, which has been a third notable phenomenon of these last four centuries, and especially of the nineteenth century. Both, in truth, spring from the same root. When a nation demands independence, or when ordinary citizens demand a share in the control of their own affairs, the motive in each case is the same—a desire that matters of common interest should be managed by consent. And, if you will think of it, you will see that the link between the Nationalist Movement and the Liberal Movement is of the most intimate kind. I challenge you to name to me any instance in which the institutions of self-government have worked well in a community which has not been unified by national sentiment. The national spirit, the sense of homogeneity and of "belonging together," is indeed indispensable for the working of parliamentary institutions. They never worked well in the Austrian Empire, because it was a complex of various and discrepant peoples. Even in our own country they began to break down as soon as the Nationalist spirit took hold of the Irish people.

instance mainly by force, though by a surprisingly slight exercise of force, but it is most certainly not by force that it is held together, but by the voluntary consent of its members. This is true even of modern India, which, amid all the throes of her new nationalism, shows no desire to break with the rest of the Commonwealth. I do not say that, in imaginable circumstances, force might not be employed by a majority of the members of this society of nations to avert its disruption. But it would be employed by their consent, not by the will of any master-prince or master-people, otherwise it would fail. The most astonishing characteristic, indeed, of this unique political system is that, unlike any other political system that has ever existed, it has found it possible to dispense with a single compulsive force at the centre.

All the tremendous factors in the shaping of human destinies which I have been discussing have been working concurrently during the last four centuries, and, more intensely during the last century, first in Europe and later throughout the non-European worlds. This has been the era of imperialism, in the sense in which we have learnt to employ the word, the imperialism which has brought many diverse peoples under a single political system, and has finally brought a world-order within sight. This has been the era of conscious nationalism, beginning with the emergence of the European nation-states at the opening of the modern age, and culminating in the fevered developments of the last hundred years. This has been the era of political self-government, which during the nineteenth century became the accepted standard of government throughout the civilised world. But this has also been the

a more amazing diversity of peoples than any political organisation that has ever existed on the earth. Yet it is also in a peculiar degree penetrated by the national spirit: its motherland was the first of the nation-states of history to realise its nationhood, and the aspirations and demands of nationalisation have spread from it to all its daughter-lands, and have even been extended, by a sort of contagion, to ancient realms such as India and Egypt which have never been touched by the national spirit until they came within its orbit. What is not less important, it has throughout its history been distinguished by an unparalleled extension of the practice of political self-government, the very machinery of which was, in fact, a British invention, and by the acceptance, as one of its basic axioms, of the principle that government must always rest upon the consent of the governed, whether that consent be given, as British tradition prefers, in a formal and organised way by counting heads, or (as is alone possible among primitive peoples) by less direct but not less effective methods.

Here, then, we have in actual existence a society of nations, amounting in sum to one-quarter of the population of the earth, which has succeeded for a long period in maintaining an almost unbroken peace among its members without imposing any uniformity of method among them, or restricting the development of their distinctive national characteristics. Here we have, in actual practice, a reconciliation between the imperialism which strives after a larger political unity, and the nationalism, the demand for self-determination, which has seemed to be in conflict with the other movement. And there is another feature of this quite unique political structure. It was, as I have said, created in the first

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VIII

SOME ECONOMIC FACTORS IN GENERAL HISTORY

BY GEORGE UNWIN, M.A., M.COM.

(Professor of Economic History in the University of Manchester)

I FIND I cannot approach the subject announced for this lecture, "Some economic factors in general history," without touching on a larger, more difficult, and more dangerous topic—the problem of the relation which the economic factors of history bear to the other factors. This is nowadays almost as bold an undertaking as it would have been in the sixteenth century to offer gratuitous public explanations of the Royal Supremacy or the Real Presence. For I cannot avoid the crucial test—Do I or do I not believe in the Economic Interpretation of History?

I trust that it will not be thought that fears of inquisitorial zeal are making me hedge when I reply that I do believe, but also that in a more emphatic sense I do not. Let denial, as perhaps the safer attitude, come first. I do not believe that the interpretation which I should wish to see applied to history can be furnished primarily or fundamentally by reference to economic facts and economic motives. But this rests on a mere act of faith: the belief that the inward possessions and experience of mankind—religion, art, literature, science, music, philosophy, but above all the ever widening and deepening communion of human

era of the British Empire, with all its experiments and vicissitudes, culminating in the new imperial system of the nineteenth century for which the word Empire seems so inappropriate that we have had to coin for it a new designation and to call it the British Commonwealth of Nations. I ask you to consider whether it is not true that our Commonwealth has displayed in the fullest degree not one but all the outstanding characteristics of political development during the modern age. It has not only given the widest range to imperialism, but has widened and transformed its meaning, and brought into being a wider partnership of peoples than the world has ever known. It has embodied the national spirit in the fullest measure in its own system, and supported and strengthened it elsewhere. It has created and diffused throughout the world the aspirations and the machinery of self-government.

We may not yet say that the age-long conflict between the demand for ordered unity and the demand for liberty is at last going to attain that reconciliation which will mean peace for the world: the life-giving conflict will, in some form, surely continue for ever. But if it be true, as it surely is, that this conflict is the very core and essence of the political history of civilisation, am I not right in suggesting to you, not merely that the history of the British Empire gives us ground of hope for the future, but that of all human history it is, from this point of view, the most worth studying?

of England or in the best chapters of the *Cambridge Modern and Mediæval Histories*, shows an immense advance over the school manuals of a generation ago. It is far more critical of the political traditions and assumptions of the past. But the one assumption almost universally though silently made is that embodied in Seeley's phrase, "History is past politics. Politics is present history." And in the minds, not only of general readers and of school teachers of history, but of those who, through the medium of Matriculation Boards and of Scholarship examinations, or through the all-pervasive propaganda of Wembleyism, mould the plastic thoughts of youth, and marshal them the way that they should go, the political interpretation of history still holds unquestioned predominance.

To this political interpretation as the dominant faith the economic interpretation of Karl Marx and his followers throws down an effective challenge. Against a dogmatism that is the more dangerous because it is largely unconscious, Karl Marx sets a dogmatism that is deliberate and explicit. Immanuel Kant said that David Hume had roused him from his dogmatic slumber. Karl Marx will not have lived in vain if he has performed a similar service for the historians of the next generation.

The academic representatives of economic history cannot, I think, be charged as a body with unduly magnifying their office. They have opposed the economic interpretation of history, not only as expounded by Karl Marx, but as expounded by Adam Smith. They have insisted on regarding economic development as subordinate to social development; and in this I think they were quite right. But they have gone on to explain

minds and souls with each other—that these are the central and ultimate subjects of history. The ultimate interpretation of these spiritual realities must be found in a spiritual background (cause and effect being perhaps the wrong terms to use in this sphere), although it may be freely admitted that economic facts and economic motives furnish the environment, the conditions, in which these possessions and experiences of man's spirit are realised.

But before the Marxian inquisitors hand me over as an irreclaimable obscurantist to the secular arm and the purifying faggot, let me read a partial recantation. As an economic historian, I must believe in some sense in the economic interpretation of history, and my faith, though not that of a Dominic, may still be a saving faith. The history that I have been speaking of as beyond economic interpretation is, after all, an ideal history. Not a history of mere ideals. The facts it should relate are real, and indeed—such is my faith—they are the ultimate realities; but the Word, though made flesh and dwelling amongst us, has not been accepted for publication in the manuals of history.

Little of it has been written. Much of it can never be written for want of records even when the desert has yielded its last papyrus and the vaunt of the earliest Hittite despot, carved on the remotest rocks of Capadoccia, has been rendered as clear and instructive as the latest fulminations of Fleet Street. The "real" history as recorded and written is mainly concerned with the "actual" events and the spiritual unrealities of the newspaper.

It is true that recent historical scholarship, as represented in the best volumes of the *Political History*

claim. Even if we look back to Adam Smith as the founder of economic history, we must recognise that Vico and Montesquieu preceded him; and the constitutional and institutional studies to which they gave a creative impulse may perhaps claim to be regarded as the central contribution of the nineteenth century to historical scholarship.

It is in the work done by the scholars of all nations in this world-wide field where historical scholarship, without ceasing to be scholarship, finds its affinities with science and philosophy that most economic historians have found their starting-point and inspiration. To those who, like myself, are deeply sensible of this obligation, there can be no question of claiming a prior importance for the purely economic aspects of history or of stressing unduly the degree of our specialisation. The economic interpretation in which I profess my belief lies not in furnishing an ultimate goal, nor an exclusively scientific method, but only in providing an additional and perhaps a more objective approach to the study of the political and social aspects of history and of the relations between them.

The first step, no doubt, an apparent objectivity
abov economic facts which may turn out to
be as The story of the wool trade
I in ext-books is a case in point.
there had been wool
use of foreign cloth
enth century the
Edward III.'s
England; and
hortage
wide-

social development as the creation of policy, and this I regard as a fundamental error. The ultimate aspect of history is, I believe, the social aspect, that widening and deepening of community which is the correlative of the moral and spiritual growth of men as individuals. Political history, like economic history, is concerned with means adopted to that end, with the persistent and suicidal abuse of those means—*i.e.*, of power and wealth—with the overgrowth and the collapse of the organs through which they work. The facts of political no less than those of economic history must therefore be regarded as to a large extent pathological, as representing so much loss and waste, as a continual series of divergences and back-slidings from the sound and healthy line of human progress.

I trust I shall not seem by this adoption of scientific terms to be raising the futile issue between History as an Art and History as a Science. We do not want less art, but more science. May the day be far distant when we cease to derive joy and inspiration from the art of Herodotus and Tacitus, of Clarendon and Macaulay, as it will certainly be farther distant when history will be written entirely on the model of Newton's *Principia* or of Darwin's *Origin of Species*. History can never be a science in the same sense as physics or as biology, but unless the study of the organised life and action of mankind becomes more detached, more objective, more disinterested than it is at present, the great advances made in the physical sciences will undoubtedly conduce, not to the progress of civilisation, but to its destruction.

To the possession of such a scientific spirit, however, economic historians can make no prior or exclusive

that in certain districts, at certain limited periods, and generally under catastrophic political conditions, portions of the open field arable were being displaced by sheep pastures without regard to the interests and the rights of peasant holders.

I have attempted this *rapid summary* of the results of the labours of many scholars during the past twenty years in order to show how the economic historian is impelled by the very nature of the facts at his disposal to displace an illusory objectivity by a real one.

Here shallow draughts intoxicate the brain,
But drinking largely sobers us again.

In what follows I propose to confine myself mainly to two illustrations of this. War is one of the leading aspects of political history. The growth of community and of class relations within narrower or wider communities is perhaps the leading aspect of social history. I shall consider briefly the approach to each of these aspects of history through the consideration of their economic consequences.

The belief in war, not merely as one of the leading factors in history—which it undoubtedly has been—but as one of its chief constructive and creative factors, is an article of popular religion held so naturally and strenuously by schoolboys that it is almost impossible to teach them history without imparting or strengthening it. It has been one of the main results of the higher criticism involved in the best historical scholarship of our time to undermine that belief, silently indeed and unconsciously, and therefore without open repudiation of it, but none the less effectually. Can anyone read the account given, for instance, by Sir

spread and continuous conversion of arable to sheep-farming which lasted till the middle of the sixteenth century, and was thus the dominant feature in English agricultural history for two centuries. This chain of reasoning forms such excellent material for a history lesson or an examination paper that it seems almost wicked to call it in question, but the facts when investigated do not support it.

It is even possible that the exportation of wool reached its maximum in the thirteenth century. In 1273, during a period of war and restriction, a list of licences shows an export of 32,743 sacks. The customs of 1354, which are often cited in later times as representing the high-water mark of the wool trade, show an exportation of 34,760 sacks, after which date there was a steady decline which became very rapid in the fifteenth century. Nor did the increased production of cloth make up for this till the middle of the sixteenth century. Edward III. did not establish the cloth manufacture. He found it expanding and taxed it. It grew from 16,000 to 50,000 pieces in the truce of Richard II., and had not advanced beyond this amount in the reign of Edward IV. As five or six pieces of cloth could be made out of a sack of wool, the amount represented in the cloth production recorded under Edward IV. is only about 10,000 sacks, which, when added to the 10,000 sacks of exported wool shown in the customs, does not amount to two-thirds of the output of 1273. Nor is there any evidence of a relative rise in the price of wool at this time, whilst there is clear proof of the increasing production of corn, for export. All that remains, then, of the traditional connection between the wool trade and enclosures is the undoubted fact

great changes in the technique and the etiquette of war, very considerable variations in the style of the diplomatic casuistry by which war has been initiated and brought to a conclusion, and an immense increase in its destructive effects upon civilisation, there are yet to be noted in all wars between civilised states, in however widely distant periods of history, certain broad economic consequences that recur with such automatic and fatal regularity as to suggest that they are beyond the remedial action of human foresight. There can be little doubt that the story will be carried back to the days of Hammurabi and Tutankhamen, but at present it begins with fully recorded detail in the history of the Italian republics of the Middle Ages. It has long been known that Genoa furnished a precedent for the Bank of England and the National Debt, but the researches of Dr. Robert Davidsohn, who has devoted a lifetime to the history of mediæval Florence, and those of Professor H. Sieveking into the financial and commercial history of Genoa, have revealed in the social and economic development of the great Italian republics a far closer anticipation of the conditions of modern capitalistic civilisation than had previously been conceived, leading to an economic collapse and a social arrest and retrogression very similar to that with which some of the larger commercial and industrial societies of Europe seem to be threatened to-day. War finance was the centre of the situation, and provides the main clue to the problems of Italian social history. The cost of the wars of civic imperialism waged by Pisa against Genoa, by Genoa against Venice, by Florence against Lucca and Pisa and Siena, was met by loans which laid the burden through indirect taxes upon the

Charles Oman of the Hundred Years' War or of its sequel, the Wars of the Roses, or that of the Thirty Years' War given by Sir Augustus Ward and by Sir Stanley Leathes, or the full and definite history of the English Civil War and the other wars of Cromwell as written by Mr. Gardiner and Professor Firth, or the story of the wars of the eighteenth century as told by Mr. Lecky, without coming to the conclusion that whatever reactions for good may have stirred in the souls of men by these wars, their general effect was destructive and evil?

The best case that can be made for war is to use the analogy of a surgical operation and to regard it as a desperate remedy for a case otherwise hopeless. But in war the operation is performed upon the patient by himself whilst in a state of delirium. He believes himself to be two distinct persons, each of which is operating upon the other. He thinks the operation will be successful in proportion to the amount of blood that is shed, and that it will not merely remove the deep-seated evil from which he suffers, but will restore his constitution to the vigour of youth. The self-doctored patient is not Germany or France, but civilisation.

Economic history leaves to the moral philosopher, to the political historian, the deeper question as to the ultimate justification for war, and deals only with the economic consequences. It considers the cost of war and the means used to meet it, and the effects produced by the use of those means upon prices, wages, property, taxation, contracts, credits, class relations—*i.e.*, upon all those conditions that determine the vitality, the stability, and progress of communities. And the economic historian finds that whilst there have been

tion and debasement produced a rise of prices that would compel the new purchasers to rid themselves of all encumbrances to the free exploitation of their property.

After the accession of Elizabeth, English agrarian history resumed a more normal course. Side by side with the increase in large farming on capitalist lines by improving gentry and prosperous yeomen and enterprising leaseholders, there was a simultaneous increase of small copyholds, especially on the Crown estates and in the North of England, where it supplied a basis for the new industrial population.

That this development of smallholders and small masters, which was encouraged by the rise of prices between the Reformation and the Restoration, should be followed during the next century, when prices were on the whole falling, by the growth of a wage-earning class in agriculture and industry, is not of itself a matter for regret, as the status of the well-organised wage-earner has generally been better than that of the small master or smallholder with insufficient capital. But the all but total disappearance of the peasant class in England in the eighteenth century was so far from being a necessary condition of the rise of a prosperous wage-earning class that it made its emergence to an independent status far more difficult, and was in itself a social disaster of the worst kind. Comparison with the social history of other countries shows that it was not inevitable, and the disappearance of a tenacious class in a conservative country seems to imply catastrophic causes.

When and how did it happen? The clearest evidence we have of the process itself is to be found in the

poor, called into existence a *rentier* class of state creditors, and by concessions to them created an atmosphere of speculation and monopoly in commercial and industrial enterprise. The social conflicts provoked by these conditions led through revolution to foreign intervention and the rule of tyrants, and furnish the only apology that can be offered by the friends of Italy for the present rudimentary state of its political life.

Disastrous as these methods were in the long run, they implied a degree of public credit only attainable in a commercial republic, and were on a higher level than the financial methods adopted by absolutist monarchies of Spain and France from the sixteenth to the eighteenth centuries, where the ever-recurring oppression of war loans was lightened from time to time by partial or complete repudiation. Nevertheless the loans of the *rentier* class upon which the finance of the Bourbons was erected have been broadened by peasant frugality to serve as the basis of an imperial republic.

In English history there has been a closer connection between war finance and social revolution than is generally realised. The admirable scholarship of Mr. Tawney has taught us to discriminate between the normal development of inequality between holdings based on gradual enclosure and piecemeal aggregation, and the rapid expropriation of peasant holders which characterised the Reformation period and culminated in Ket's rebellion. The comparative violence of enclosures between 1535 and 1550 is sufficiently accounted for by the facts that Henry had not only confiscated and thrown upon the market immense quantities of land, but had also by an unexampled pressure of taxa-

think, be more disposed to accept the unfavourable views about national debt expressed by David Hume, by Adam Smith and Mr. Lecky, than to adopt the buoyant optimism of Macaulay.

But I prefer to take as my final and chief example of the economic consequences of war and of their reactions upon political and social conditions the case of the great American republic. Mr. Lecky made us familiar long ago with conditions, almost of social anarchy, produced by the methods of inflation by which the War of Independence was financed. The evils of an unstable and manipulated currency were not new in America, but they then became the dominant factor of social life. "A large part of the upper and middle classes were ruined." "Widows, orphans, and old people were suddenly deprived of their means of life." "Men of broken fortunes and speculators were enriched." The material consequences did not cease with the war, and the moral consequences had a much longer duration. In a new and rapidly expanding nation of farmers where the majority are continually in debt, inflation offers the most tempting short cut to prosperity, and the demand for reinflation, renewed from time to time by English farmers for nearly a generation after the Napoleonic war, has remained a leading plank in the platform of American democracy ever since the Revolution.

But inflation was not the only resource of the war-finance of the confederated states. A considerable debt was incurred to wealthier citizens and sympathetic allies, as well as a debt in land to officers in the army; and the fear that this debt might be repudiated by democratic legislation, or nullified by reinflation, was

estimates made by Davenant and Gregory King in the reign of William III., that half the population on the land, including both smallholders and labourers, was below the poverty line. This estimate may be an exaggeration, but its general purport receives striking support from an unpublished tract, written by Richard Baxter in 1691, and recently discovered by Dr. Powicke. It is an appeal to the gentry of England on behalf of their poor tenants, the smallholders, whose lot it describes as being worse than that of their own labourers, owing to the rack rents that had, by that time, become the prevailing form of tenure. But how had these conditions been produced? The most probable solution of this problem I can offer is the one suggested to my mind by Mr. Lennard's admirable study of the sequestrations of the Civil War, as exemplified in the case of Northamptonshire. In that time of revolution, as in the one of the preceding century, immense masses of land were confiscated and thrown upon the market at a time of rising prices, when all the older social restraints upon exploitation were loosened, and as thirty years' leases were granted to speculators on the payment of heavy fines, the full effect of these changes would naturally be felt at the time of the Revolution.

That, after the Revolution of 1688, a permanent debt for war purposes became, in England, as it had been in Holland and Genoa, a leading factor of economic development, is a commonplace of history. As to the effects of this on the social conditions of the eighteenth century, those who study carefully the account of it down to 1720, given in Professor W. R. Scott's great work on Joint Stock Companies, and have sufficiently reflected on the parallel facts of our own time, will, I

commercial supremacy ; that Cromwell and Chatham, the two great inheritors of the Elizabethan tradition, "made trade flourish by means of war."

It is in vain for serious historians to refute this tradition. Facts of the only kind that appeal to the popular and the schoolboy imagination seem to prove it conclusively. Bunyan's Interpreter showed Christian a man continually casting water upon a fire, "yet did the fire burn higher and hotter." With only these facts to go upon, the casual beholder is bound to conclude that it is the water that feeds the flames, and no merely scientific proof of the inherent properties of water will suffice to establish the contrary. The wayfaring Christian must be taken round to the back of the fire, and see the oil of grace being cast secretly into it, before he will realise that he that casts on water is the devil, and that the water if left to itself would soon extinguish the fire.

In my application of this parable, the oil that feeds the fire of human progress represents the positive and creative factors in history.

And now I want to consider briefly how the economic facts of history may lead us to the discovery and the appreciation of these creative factors. Creative of what ? What is the outcome of history ? In Seeley's view the creative factors were the wars of previous centuries, and the outcome of history was the British Empire of the early eighties, and perhaps also the other empires that were then beginning to partition Africa and Asia. But the political outcome of to-day cannot be justly described as a creation. It bears a closer resemblance to that primeval anarchy before the light was divided from the darkness, when the spirit of God

one of the chief influences that determined the lines on which the American constitution was framed. Such, at least, is the contention of Professor Beard in his book, *The Economic Interpretation of the Constitution of the United States*, and I think he has fully made out his case. Dr. Davis, in his *Early History of American Corporations*, has carried on the story for another five years, and has shown how speculation in the war debt, and in the land grants thus secured, and in the shares of companies that sought to capitalise the new protectionism also favoured by the Federalists, produced a great commercial and financial crisis in 1792 which was not without its reactions in England and France at a critical moment in the history of Europe.

I will take it, then, as proved that the economic consequences of war have been amongst the foremost factors in history, and that they have been negative factors. But why labour this point? Who would deny it? I answer that the whole popular tradition of history and of elementary historical teaching is a denial of it. All wars have always been right on both sides, and since "to follow right is reason in the scorn of consequence," governments have always felt justified in concealing the consequences, so as to strengthen the faith of their people, who, in their enthusiasm for righteousness, are always willing to be deceived. And what governments and people are concerned to conceal it is hard for historians to discover. Hence the almost unshakable conviction of our school histories that Edward III. was not only the victor of Crecy, but the Father of Commerce; that the freebooters of Elizabeth's reign not only founded the British Empire (which they certainly did not), but laid the foundations of England's

not merely involved within each nation, but between nations, and even between continents and the great racial divisions of mankind; and a still more important development of social mobility by virtue of which the Chinese emigrant becomes a mining magnate in the Straits Settlements, the Indian coolie a market gardener in South Africa, and the poor lad of Dunfermline ends as the Steel King of Pittsburgh and the Lorenzo Magnifico of a democratic Renaissance. Finally, there is the rapid growth of mass organisation amongst labourers and capitalists, adapting itself from decade to decade to the changes in technique and transport, the ebb and flow of markets, and aiming on either side at the secret manipulation or the open control of political power.

Now all these aspects, except in part the last, may be claimed, I think, as positive and constructive factors of history. They are aspects in the development of a world economy, which implies, however unconsciously, a world community—the great society of whose instability and probable collapse Mr. Graham Wallas wrote prophetically in his last pre-war book.

The importance of some of these facts has been recognised by political history. They constitute the industrial revolution which enabled Great Britain, under the guidance of "a heaven-born minister," "to save herself by her exertions and Europe by her example." But when on looking back we find that the revolution has been going on for two centuries, and had been in preparation for two centuries before that, when we find that both in its causes and consequences it affects the lot of that three-quarters of the human race who are still farmers and peasants as profoundly as it does that of the industrial worker, we

had not yet begun to move on the face of the deep. If we are to have any hope for the future of mankind, we must believe in a present world as the outcome of history, which is better than politics, and of which the political world of the future may be a more worthy though still very inadequate expression. Let me repeat my own definition of the outcome of history as the inward possessions and experience of mankind—religion, art, literature, science, music, philosophy, but above all the ever-widening and deepening communion of human minds and souls with each other. These things, in my opinion, embody not only the main outcome of history, but also its main creative factors.

These spiritual activities of man are the ends in themselves for which politics and economics ought to supply the means. As means are more palpable than ends, we approach the study of the ends through that of the means, and I wish to suggest that the economic means may provide a more objective and scientific line of approach than the political means.

In former years, when I used to give a course in the general history of the nineteenth century to a mixed class of arts and commerce students, I found myself impelled by mere considerations of method to approach the subject through its broader economic and social aspects. First of all, there is the increase of population —two- to six-fold in Europe and Asia, twenty-fold in America, which is unexampled in history and the biggest fact of our epoch. And this has been made possible by an immense increase in the productive capacity of mankind as a whole. This, again, has increased efficiency through division of labour, has involved a much greater mobility of individuals and of family groups,

connections in a wider environment, and its causal forces in a deeper world of social growth. And the ultimate creative activity which we are driven to contemplate and define is, I suggest, the twofold growth of community—an extensive growth between communities of a wider community that seeks to embrace the whole of mankind, and an intensive growth by which the older and more vital communities of kinship and fellowship, of work and worship, are being remoulded in accordance with higher impulses of individual freedom.

I trust that the drift of my twofold illustration is becoming clear. I propose to approach the deeper consideration of political and social history through the study of the economic consequences of war on the one hand and of the growth of community on the other. And it now appears that these are merely the positive and negative aspects of the same process. War is a suicide of community: of a wider community between national communities; and its inevitable consequence is that as the national communities resume their isolation, the more intensive communities within them revert to a more primitive type—to the loss of freedom and progress. War leads a nation through tribal solidarity to class conflict. These are facts which the political records automatically conceal and which popular history and the school teaching of history under nationalist influences necessarily ignore. They ignore also, or take for granted, which is the same thing, the existence and the operation of these creative factors, which alone account for progress and freedom. They show the man with the watering-pot at his great feat of keeping in the fire. The task of the

may begin to doubt whether the phrase Industrial Revolution, though useful enough when it was first adopted, has not by this time served its turn. I do not claim that the study of economic history can readily furnish an adequate definition, but it should certainly force us to seek one. The economic history of the nineteenth century has not been written in any complete or adequate form: perhaps it never can be. We have monographs on the organisation of agriculture and industry, of capital and labour; monographs on banking and currency, on fiscal policy, on the history of transport and of trusts. But no serious student of any of these aspects can delude himself with the idea that it can be satisfactorily isolated from the others, or that the local or national conditions with which he may be specially concerned are entirely unaffected by the growth of the world economy. There can be few intelligent cotton-spinners, whether masters or men, who do not realise their practical concern in the depredations of the boll-weevil or the failure of the monsoon, in the religious convictions of Mahatma Gandhi and the family budget of the Chinese peasant.

The claim that I have been making, then, for the study of economic history is this: it does not propose to displace the study of political and social history, but to lead up to the more adequate and fundamental consideration of them, through the objective approaches furnished by modern economic records which, whatever their defects, are more many-sided and complete, more disinterested and reliable, than the political records of the past. Its merits as a study do not lie in its dogmatic self-sufficiency, but in the enforced recognition of its essential incompleteness, driving us to seek its

IX

THE BIRTH OF MODERN SCIENCE

By CHARLES SINGER, M.A., M.D., D.LITT.

To understand the nature of the rise of Science in the Modern World it is necessary to grasp the nature of the system out of which it rose, the Science of the Middle Ages. The scientific system of the Middle Ages is based on what had been left of Greek scientific thought after the destruction of the Empire. This material was modified and tempered by Christian views which, in their turn, had been influenced by pagan philosophy.

The basis of the mediæval scientific system was the Aristotelian doctrine of the four *Elements*, Earth, Air, Fire, and Water. Out of these all material substance was composed. The elements themselves were formed in binary combination from the four *Qualities*, Hot, Cold, Moist, and Dry. Thus Fire was thought of as combined of the Hot and the Dry, Water of the Cold and the Moist, and so on. In the same way the elements themselves by binary combination constituted the four *Humours*, Blood, Phlegm, Black Bile (Melancholy), and Yellow Bile. Out of these Humours the living body was built up.

With this view of the constitution of matter was combined the geocentric doctrine of the nature of the Universe. In the centre of the world, it was held, there was fixed the spherical Earth. It is a common error to suppose that the Middle Ages believed that the

economic historian is to exhibit the true chemical properties of water in the extinction of fire, and thus to impel the thoughtful spectator to penetrate the secret of the sacred oil that feeds the flame of God's purposes in man's life.

system. The first disturbing element was the contact with the Orient. Until the thirteenth century Islam, which had inherited Greek wisdom more fully than the West, held by general admission the main intellectual treasures of the time. An extremely important legacy of Islam to the West was the system of numerical notation, in which the figures depend for their value on their position. These "Arabic" numerals replaced the clumsy Roman system of numerals, in which calculation could only be made by means of the abacus. The Arabic system was ultimately of Indian origin.

Another idea that came in from the Orient was Anatomy. Until the advent of these Arabian ideas man was hardly thought of as having any structure at all. Although the Oriental anatomy was very inaccurate, it thus represented a real advance.

Perhaps the most important addition to man's knowledge with the arrival of the Arabian learning was, however, in the department of Astronomy. This was a subject to which Islam attached great importance. Along with much astrological lore, there came over a great deal of real astronomical knowledge. The advent of this new astronomical material made men realise that the Universe was a much more complicated affair than they had thought.

Astronomy turned men's minds to optics, and by the thirteenth century genuine optical observations were being made. The most interesting of these were those of Roger Bacon, who developed a clear, though erroneous, view of the action of lenses. This led to the invention of spectacles, which were introduced about 1280. The invention was of enormous importance; not enough weight has yet been given to it.

Earth was flat. With the exception of a few fanatics, the universal educated opinion of the Middle Ages was that the Earth was a sphere. Surrounding the Earth was the atmosphere, which was limited by the spherical firmament, an idea derived from Scripture. Above the firmament were ranged concentric crystalline spheres, seven in number, each of which contained one of the planets. Their movement explained the planetary wanderings. Beyond these spheres lay the sphere of the fixed stars, which rotated regularly. This sphere was in turn surrounded by a final sphere, the *primum mobile*, which provided the motor power for the whole and formed the frontier of the Universe. The Universe was thus strictly limited, and outside it was nothing.

The third fundamental doctrine of mediaeval science was based on the belief that there was a relation between this limited cosmical system and the events in man's life, and notably in his body. Definite schemes were drawn up to explain this relationship. The commonest of them, and that which was universally accepted during the Middle Ages, was one in which the Signs of the Zodiac were ranged on the various parts of the human body which they were supposed to control. This was the basis of astrology. Astrological teaching was universally accepted.

With this system before men's eyes there was little, if any, impulse to investigate further. The general scheme was clear, and all that inquiry could possibly do was to fill in details. Hence there was no "research" during the Middle Ages.

Beginning from the twelfth or even from the eleventh century onward, there was a series of events in the intellectual world which tended to break down this

two basic works of modern science, that *On the Fabric of the Body of Man* by Vesalius and *On the Revolutions of the Celestial Orbs* by Copernicus. With such works before them it was impossible for men any longer to have any regard for the old parallelism between man and the world. The actual structure of the body and the Universe were seen in a new light, and seen to be utterly different.

There was yet another reason why the new teaching was so utterly revolutionary. The old scheme had regarded the world as limited, with our earth in its centre. With the displacing of the earth from its position, the Universe, deprived of a centre, came to be thought of as also without a circumference. A conception of an infinite world was introduced susceptible of infinite investigation and exploration. It is this note of the infinite world with endless hope for knowledge that marks off mediæval from modern science. That hope marks out the mediæval from the modern. It makes in itself a criterion far better than mere date. Apply the test to any character in history. Does he place his golden age in the past? He is a mediæval man. Does he look to the future for the fulfilment of his hopes? He is a modern man. Hope in the future is the spiritual gift that Science has given to Man.

Spectacles practically doubled the effective adult life of the learned.

With these new streams of thought there came about gradually a veritable revolution in that other form of mental activity which divides with *Science* the task of describing the external world. Naturalistic *Art* was reborn. Beginning about the middle of the thirteenth century we see naturalistic themes gradually creeping over the field of Art until their final development at the period known as the Renaissance. In this process the new knowledge of Anatomy, which was beginning to be studied by the artists, played no small share. Mantegna, Leonardo, Michelangelo, and Dürer among many other artists exhibit this anatomical interest.

In the department of pure *Science* these influences made themselves felt earliest perhaps in connection with the observation of plants. Plants were of great use in medicine, and their distinction was a matter of practical importance. Before the first half of the sixteenth century was over, the so-called "German Fathers of Botany," Brunfels and Fuchs among them, had produced figures which would adorn any modern scientific treatise.

There were other factors that led toward the disturbance of men's minds. Printing not only spread knowledge, but also standardised it, and produced texts which could be criticised and discussed. While the general tendency was toward the encyclopædia, which summarised knowledge, the revolutionary influence of such men as Paracelsus and those who followed the chemical school of thought tended to turn men's minds from the mediæval scheme.

The crisis came in 1543. In that year appeared the

the calendar which had been entrusted to them.¹ For on the first day of the last moon of autumn the sun and moon made an eclipse in the constellation of Fang. The blind man had beaten the drum, the officers had mounted their horses, and the people had assembled. But Hi and Ho, like wooden statues, saw nothing and heard nothing, and by their neglect to observe and to calculate the motion of the stars they violated the death-carrying law of our ancient kings. For thus deserting their post they were punished with death."

The Chinese were fond of magic squares,² which they asserted came to earth on the back of a tortoise that arose from the Hoang-Ho.

But the oldest extant mathematical record of any consequence is a papyrus, now at the British Museum,³ found at Thebes in 1858. In size it would make a frieze for one wall of a small room. Figures of rectangles, isosceles triangles, and pyramids are easily recognisable, and the clear script is curiously neat. The papyrus is a copy made about 1700 B.C. by a

¹ The Astronomer-Royal held a high position in China. The office was hereditary, and the records formed an immense sequence of authentic and dated documents. In 213 B.C. all books were condemned to be burnt, but forty years afterwards there was a revival of learning, and the books, carved on bamboo and easily buried, were restored as far as possible. For fuller information see Yoshio-Mikomi, *The Development of Mathematics in China and Japan*.

² E.g.,

2	9	4
7	5	3
6	1	8

The tortoise-shell was used for divination.

³ The Rhind Papyrus. Facsimiles may be bought from the Museum.

X

THE HISTORY OF MATHEMATICS

By H. E. J. CURZON, M.A., D.Sc.

(Lecturer in Mathematics at Goldsmiths' College)

IN studying the Development of Civilisation, the story of the growth of mathematics is not out of place. It is a continuing story of achievements won by reason; it serves to link together all the different civilisations; it is an epitome of the steady march of men towards freedom and truth.

One of the earliest records of man's interest in mathematical problems is to be found in Switzerland, where there are remains of lake dwellings exactly oriented towards the four compass points, dating back to beyond the so-called Bronze Age. This orientation probably involved marking shadows at sunrise and sunset and bisecting an angle.¹

The first mathematician remembered by name, however, is Li-Shou,² who invented the Chinese swán-pán, or abacus. He was a minister of the Emperor Huang Ti, who reigned about 2637 B.C.

The following record³ contains a reference to an eclipse that happened in 2155 B.C.:

"In the reign of Tchong-Kang, Hi and Ho, sunk in wine, were the first who disturbed the good order of

¹ Cantor, *Vorlesungen über Geschichte der Mathematik*.

² Biot, E. C., *Le Tchou-ki ou rituel des Tcheou*.

³ Père Gaubil, *Les Sce Chou: Legge, The Chinese Classics*.

was mentioned in a recent evening newspaper as in use by Russian peasants. The mathematician, Tannery, emphasised its practical utility, but in mathematics the survival of the fittest is a ruthless process.

The Egyptian formula for the area of a quadrilateral $\frac{1}{2}(a+c)(b+d)$, approximately true for roughly rectangular figures, is still in use in rural districts of England,¹ but all Egyptian formulæ bore this empirical stamp, and as late as 237 B.C. their priests were still using an incorrect formula for finding the area of an isosceles triangle.

Egyptian mensuration was also concerned with measuring round barns (using $\pi = \frac{4}{3}\frac{22}{7}$) and with ornamentation—always a fruitful source of geometry. In the papyrus are solved five problems on pyramids. In modern language one of these would read: "Find the cosine of the angle that each slant edge makes with a base edge," and the measurements involve accuracy to the nearest minute. The Egyptians also had a very elaborate system of finger and hand counting.

The Greeks ascribed mensuration, astronomy, and arithmetic to the Egyptians. Plato in the *Phædros* says that the 'God' Thot was the founder of number, of counting, of geometry and astronomy. Aristotle traces all mathematics back to the Egyptian priesthood. But mathematics as a deductive science begins with Thales of Greece—where truth gradually overcame magic—and it was Plato, the inspirer of mathematicians, and Aristotle, explainer of the rainbow, who laid the foundations of science for all time.

¹ Leicester C.C. Education Committee, *Suggestions on the Teaching of Arithmetic*, p. 28.

scribe, Aāh-mes, from a copy made about 2200 B.C.¹ of a compendium of rules in arithmetic and mensuration. It begins: "Rules belonging to the knowledge of all dark things—all heaven-knowledge which can come into the understanding. This book is made in the year 33 under the King of Upper and Lower Egypt, Ra-ā-us. . . ."

No fractions (except $\frac{2}{3}$) are used with numerators greater than unity.

Thus, $\frac{2}{75}$ is written $\frac{1}{5} + \frac{1}{25} + \frac{1}{75} + \frac{1}{75}$. Of course there is no symbol for zero.

A question often asked by my students is: "With their cumbrous notation, how did the Egyptians, Greeks, Romans do multiplication?"

Probably by a method in universal use up till quite recently.²

Multiply 157 by 83.

83	157
41	314
20	628
10	1,256
5	2,512
2	5,024
1	10,048
<hr/>	
	13,031

Halve on one side and double on other. Cross out all numbers on right which are opposite even numbers on left.

The explanation is a simple exercise. This method

¹ When Alexander took Babylon, after the battle of Arbela, astronomical records were found there dating back to 2231 B.C. (Cajori, p. 7).

² Heath, *History of Greek Mathematics*, p. 52.

the school motto which became famous, "A figure and a platform, not a figure and a sixpence." Such was the beginning of deductive geometry.

The theorem that the sum of the angles in a triangle is equal to two right angles is due to the Pythagorean school, but it is doubtful whether the proof of the theorem called by his name is due, at any rate in its general form, to Pythagoras himself. But the idea of methodically using one theorem to prove the next, and so to build up a structure of geometric knowledge, was certainly the method used in his school at Crotona. He was one of the first to assert that the earth is spherical. His school was also deeply concerned with the theory of irrational numbers. They would have approximated successively to $\sqrt{2}$ by means of $\frac{3}{2}$, $\frac{7}{5}$, $\frac{17}{12}$, $\frac{41}{29}$, $\frac{99}{70}$, $\frac{239}{169}$, etc.¹

As the deductive method became perfected, teachers, fortunately abandoning the secrecy of the Pythagoreans, embodied mathematical knowledge into textbooks called Elements. Hippocrates of Chios was the first writer of Elements; he lost all his money to customs-house officers at Byzantium, with the result that since then mathematicians have always been regarded as simple! But the text-book that finally survived was that of Euclid, who abstracted from preceding

¹ These would have been got, but geometrically, from the identity $2(x+y)^2 - (2x+y)^2 = y^2 - 2x^2$.

Thus, if $y^2 - 2x^2 = \pm 1$, then $(2x+y)^2 - 2(x+y)^2 = \mp 1$.

Now, $3^2 - 2 \cdot 2^2 = +1$, so put $y=3$ and $x=2$.

Then, $7^2 - 2 \cdot 5^2 = -1$, so put $y=7$ and $x=5$.

Then $17^2 - 2 \cdot 12^2 = +1$, so put $y=17$ and $x=12$; and so on.

There are other methods which students will discover for themselves.

Thales of Miletus¹ (624-527 B.C.), according to Proclus, the historian of Greek mathematics, first went into Egypt, and thence introduced geometry into Greece. Plutarch distinguishes him from the others of the Seven Wise Men as "apparently the only one whose wisdom stepped beyond the limits of practical utility." He used the shadow method for finding the height of a pyramid, and probably taught the theorems that the angles at the base of an isosceles triangle are equal, and that the angle in a semicircle is a right angle. He also devised a method for finding the distance of a ship from the shore, a method that must have depended upon the construction of similar triangles.

Pythagoras² (572-497 B.C.) was advised by Thales, then an old man, to go to the Egyptian priests for instruction. After spending twenty-two years in Egypt and twelve years in Babylon,³ steadily pursuing geometry and astronomy, he returned to Samos, where he failed to arouse any interest in his subject, while at Sparta they were interested only in history and archaeology. So Pythagoras bribed a boy⁴ by giving him an obol for every fresh proposition mastered. Eventually the boy was weaned of his sixpences, and Pythagoras made up

¹ For Greek mathematics see Heath's *History of Greek Mathematics*, a work comparable with Cantor's monumental *Vorlesungen*, already quoted. Also see Frankland's *Story of Euclid*. For Thales, in particular, see Decker's *De Miletie Milesis*. For a general survey, Singer's *Greek Science and Modern Science* is clear and inspiring; also his *Chapters in the History of Science*.

² See Heath and Cantor.

³ Strabo, xiv. (tradition says Pythagoras was carried away by Cimbrii).

⁴ Heath, in an address to the Mathematical Association, March, 1921, Yorkshire.

forget his food, and when anointing himself he would make geometrical figures in the oil on his body. He was inadvertently killed in the sack of Syracuse, but the Romans set up a monument to him which Cicero mentions as worth a visit. It was a sphere enclosed in a cylinder, because Archimedes regarded his proof of the theorem—that the surface of the zone of a sphere is equal in area to the corresponding zone on the cylinder—as his most beautiful discovery. He was the forerunner of the great mathematicians of the seventeenth century who invented the integral calculus.

From the death of Archimedes until the time of Napier no great advance was made in mathematical thought,¹ although the technique of arithmetic, algebra, and trigonometry slowly improved. There was a flux of culture towards the East where the great Caliphs of Bagdad appear as patrons of learning;² and a return flux towards the West through Arabia to Spain; and from the East to the monasteries of Western Europe.

One of the most interesting developments of this period is the gradual triumph of the Hindu-Arabic

¹ Diophantus of Alexandria, the inventor of algebra, flourished about A.D. 200 (see Heath, *Diophantus of Alexandria*, and Tannery, *Diophantus Alexandrinus*). A typical Diophantine problem is: "Find three numbers such that the product of any pair, plus or minus the sum of the three numbers, shall in each of the six cases form a complete square." Tannery, following Diophantus, obtains $\frac{781,543}{67,280}$, $\frac{781,543}{109,520}$, $\frac{781,543}{255,380}$. The following set, using a

non-geometric method, is simpler: $\frac{91}{36}$, $\frac{35}{4}$, $\frac{70}{9}$.

² Omār Chayyāmī, the poet (A.D. 1046-1123), wrote an algebra dealing with cubic equations. His formula for the roots of a quadratic is still in use.

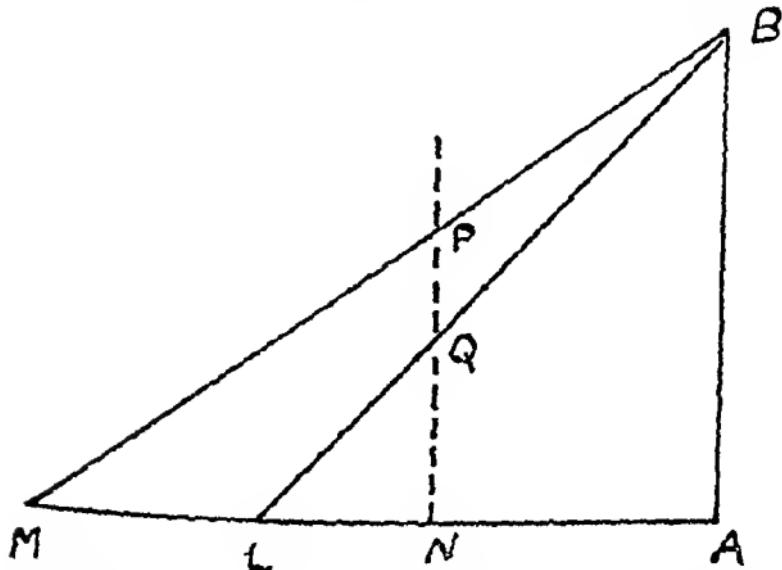
text-books and from contemporary research all that was valuable in elementary geometry, and organised the material as part of his work as a lecturer in mathematics at the University of Alexandria. He must have flourished about 300 B.C., but practically nothing is known of him except, of course, his book. He seems to have been the best of all teachers—a teacher without “personality.” He taught the world geometry for 2,000 years, and he left behind a postulate boldly calling attention to the need for further investigation into the theory of parallels—an investigation successfully carried out during the last hundred years and culminating in the Theory of Relativity.

Once Euclid and his colleagues had taught the art of thinking tidily about material structures, men were able to apply pure mathematics to physical science, and freely thinking Greece bore Archimedes.

A great deal is known about Archimedes (287-212 B.C.) because of his stalwart defence of Syracuse during the second Punic War. His infernal machines so thoroughly frightened the Romans that once when Marcellus deployed his men to storm the walls, and old Archimedes (then seventy-five) just let a rope slither gently down the wall and dragged it back again, the Romans bolted, crying, “There it is.” When urged to leave behind him some written record of his inventions he refused, because “he regarded as ignoble every form of art which is directed to profit.” He sent all his discourses before delivery to a friend named Conon, whom he met at the University of Alexandria; and another friend was the famous athlete and mathematician, Eratosthenes, who measured the size of the earth, the moon, and the sun. Archimedes when working used to

lay in improved methods of using the abacus. The great Gerbert, tutor to Otto III. and afterwards Pope Sylvester II. (999-1003), whom Cantor thinks worthy of a chapter to himself, had so perfected the methods of computation by means of the abacus that it became an instrument for highly complicated number games. During the twelfth and thirteenth centuries "gerbertista" was slang for counting.¹ As an example of Gerbert's teaching power I give the substance of chapter xxxvi. of his *Discipline of Mathematics*.²

If you have to find the height of a tower, do it this way:



¹ Radulph, a colleague of Anselm at Laon, wrote about the abacus in 1131.

² Migne. This is perhaps the first text-book adapted to the use of boys. It begins very much like the Elements, but suddenly asks the question: "What is the use of geometry?" It at once proceeds to a series of applications to out-door problems such as would be typical of modern methods to-day: examples on paving, making sundials, measuring with arrows and thread, finding widths of rivers on Pythagoras' theorem, estimating errors, etc.

numerals¹ over the abacus² and finger counting. The characteristic feature of the Hindu-Arabic notation is the symbol for zero and the consequent principle of local value.³ The nine symbols other than zero date back to at least the third century B.C., but the first certain appearance of the zero symbol (which sometimes took the form of a dot) was in India in A.D. 876. By the eleventh century the notation was more or less established in Arabic arithmetic.

The first English record containing Arabic numerals has the date 1246, but the notation would probably be known to merchants long before it reached the attention of scholars. In 1202 an elaborate work on arithmetic was published by Fibonacci of Pisa which was too scholarly for merchants and too commercial for scholars, but in 1250 John of Halifax (Sacrobosco) published an *algorismus*⁴ which quickly became popular.

The bankers of Florence were forbidden the use of Arabic numerals in 1299.

The great obstacle to the spread of the new notation

¹ Smith and Karpinski, *Hindu-Arabic Numerals*; G. R. Kaye, *Indian Mathematics*; Cunnington, *Story of Arithmetic*; G. F. Hill, *The Development of Arabic Numerals in Europe*.

² In an English "Arithmaticke" of 1620, groats are changed into higher denominations by using the abacus.

³ This principle was used on Babylonian tablets giving astronomical records as early as 2300 B.C.

⁴ "Algorism" derives from Mūsā-al-Khowārazmī, a great mathematician of Bagdad (c. A.D. 830), who wrote an *Arithmetic* which was translated into Latin by the traveller-scholar Adelhard of Bath, who also translated (1130) Euclid into Latin from Arabic. Cf. augrim stones in the *Miller's Tale*. For Adelhard see Hermann Gollancz's translation of Adelhard of Bath's *Quæstiones Naturales Perdifficiles*.

published his arithmetic¹ and started the revival of mathematics in England. On the title-page is a woodcut showing men using counters on a chequered table. Arabic numerals are chalked on the same table, and there is a referee. In his introduction Recorde says: "For excellency of natural wit fewe nations do match Englishmen—but so they pass all men in vain pleasures. . . . Some will like my book above any other English arithmetic hitherto written, namely such as lack instructors." He uses dialogue, and once in reply to an exasperating docility from the scholar the teacher says: "Though I might of my Scholar some credence require, yet except I show reason I do not desire it." He gives the first four rules, simple and with money, and the rule for casting out nines. He does subtraction by equal additions. His method for division is very complicated, but he sets down a Golden Rule of Three problem in the following simple form :

16s. for 3 months, how much for 8 ?

$$\begin{array}{r} 3 \diagup 16 \\ 8 \diagup \quad 42s. 8d. \end{array}$$

Reduction sums are included and also Progressions. There is a chapter on the abacus, and a page of diagrams showing the conventions for counting by the hand and fingers.

The book ran into several editions, and by 1623 its title-page ran: "Augmented by John Dee and since enlarged by J. Mellis—whereunto is added a Compendium of interest calculated by R. Norton and now

¹ There is a beautifully preserved copy in the British Museum. Recorde was the first to use the = sign, but in another book.

Let the tower be AB.

Stick up a vertical rod, pierced with holes, at N. Go back from it until you see the top, B, of the tower from L through a hole at Q.

Measure, and suppose NQ is 6 cubits and NL is 13 cubits. Go backwards again until you see B through another hole at P, looking from M.

Measure, and suppose NP is 7 cubits and NM is 16 cubits.

Then $\frac{NL}{NQ}$ is $\frac{13}{6}$, therefore $\frac{LA}{AB}$ is $\frac{13}{6}$.

Also, $\frac{NM}{NP}$ is $\frac{16}{7}$, therefore $\frac{MA}{AB}$ is $\frac{16}{7}$.

Hence on subtracting, $\frac{ML}{AB}$ is $\frac{16}{7} - \frac{13}{6}$, i.e., $\frac{5}{42}$.

Hence $\frac{AB}{ML}$ is $\frac{42}{5}$. But ML is 3 cubits.

Therefore AB is $\frac{42 \times 3}{5}$ cubits. Answer, $25\frac{1}{5}$ cubits.

Note the use of an example rather than a reduction to rule of thumb.

We can easily understand how Gerbert was accused of black magic, like Napier later, the inventor of logarithms. Tradition asserts that Gerbert introduced the Hindu-Arabic numerals into Italy from Spain after learning them from the Moors, but legends were bound to crystallise round such a personality.¹

In the great advance that presently was made England did not lag behind. In 1543, Robert Recorde, physician to Edward VI. and afterwards to Mary,

¹ Olleris, *Vie de Gerbert, premier Pape François*.

end Newton told Halley that he did not care what the title was, so long as it helped the sale, "which I ought not to diminish, now 'tis yours." Indeed, Newton quarrelled with everybody; but remember the aunt's remark. Newtonian mathematics has governed the material progress of the last two centuries. Until now, Archimedes and Newton have stood in a class by themselves; but in 1905 Albert Einstein published a short paper in the *Annalen der Physik* containing this sentence in the introductory paragraph: "In order that mathematical descriptions may have any physical meaning, it is necessary to have a clear idea of that which one calls Time," and a new epoch in mathematics began.

for the second time corrected, illustrated and enlarged by R. Hartwell—new tables of Interest upon Interest by R. C., etc." It is not difficult to trace the links between Recorde and Pendlebury.

In 1642 Newton was born.¹ Newton started where Archimedes left off, and at the end of his life he had singly contributed to mathematics as much as all his great predecessors together. His great period of inspiration was from 1665 to 1669.² Newton started on his life research by wondering whether the "force" that pulled at an apple reached as far as the moon. This led him to make telescopes, and in about a year he told the world more about light and prisms and the rainbow and lenses than anybody knew before. Then he wanted to know how, by his observations upon the moon for a short interval, he could deduce its movement for longer intervals; so he invented the calculus and lectured about the Curvature of Conics. He discussed Time and enunciated his Three Laws of Motion. Finally he framed his Law of Gravitation which unified the labour of astronomers since man began to wonder. Once somebody was saying that Newton was a great man. His aunt, who brought him up, replied: "He's a great boy." He was very quarrelsome, and too fond of accusing others of plagiarising. He lost interest in a problem once it was solved; and his *Principia* would never have been published but for his friend Halley, who was appointed by the Royal Society "to keep Mr. Newton in mind of his promise." Halley had a terrible time, and at the

¹ De Morgan, *Essays on the Life and Work of Newton*.

² Einstein wrote his first paper on Relativity at the age of twenty-six.

of man's æsthetic appreciation of the beauty of the face of the world, it is quite clear that the value of the service which can be rendered by creative people was realised in the earliest times. Practical human affairs were in the hands of two castes—the King, or Warrior caste, and the Priest caste—and each realised in themselves a want which creative people could supply. Let us consider it in this way: the faith which impelled creative people to set down their views of the truth for its own sake with no other purpose in view was very quickly exploited by the ancient world, just as it is by the commercial world to-day; and the ancient kings and priests used the artists and seers to serve their own limited ends. The king, for example, wanted to inspire 'terror into his potential enemies by showing what desperate things he would do if they had the ill-fortune to fight against him. Possibly he was a weak man and his army a small one, so he practically advertised his power, very much as the modern charlatan may, by advertisement, create a market for his wares. The priest did something of the same kind; he used the supreme faith of the artist, not to pursue truth for its own sake, but to impress on the multitude the fact that any who dared to disobey the priestly edicts would be turned on a spit over a fire or find themselves the victim of some other no less horrible form of retribution. Or, on the other hand, as all who have visited the old Italian churches will know, the joys of heaven were shown in the most charming and ravishing of ways. There were ladies with wings, beautiful dresses, perfectly coloured—simply a straightforward kind of advertisement.

I am not going to suggest, however, that the artist

XI

SOME DESULTORY REMARKS ON ART AND CIVILISATION

By WILLIAM ROTHENSTEIN

(Principal of the Royal College of Art)

IT would be absurd for anyone like myself to attempt to grapple with the whole vast phase of history—the province of the anthropologist and the historian—and so I propose to leave the earlier part of man's creative activities entirely alone and to touch only on a short period of the history of his efforts—those few thousand years which, until lately, we thought embraced the entire history of human endeavour.

Whilst most of us will agree that the finest fruits of human culture lie in man's creative activities, we are confronted with an arresting problem: How were these early works of art, which attained to an extraordinary degree of refinement, conceived and carried out when social life was still in a primitive state? Perhaps the best way to realise something of this mystery is to look at our own problems to-day and to try, in their light, to conceive the growth of artistic activity in the past.

In a time when there are so many schools of æsthetic appreciation of art it will be well to approach the subject simply, and in a spirit of common sense. The suggestion which I should like to make is something of this kind: that whatever may have been the beginning

now at these pictures from a purely æsthetic point of view; but people living in those days were in constant danger of seeing their wives and daughters treated in a similar way by marauding hosts. These pictures had a very significant meaning, and this raises another point for our consideration.

There was in the past very little preoccupation with the æsthetics of art and a great deal of preoccupation with subject matter. To-day, with Education Authorities trying in every direction to teach people an appreciation of art, the reverse principle is being exaggerated—that the appreciation of art is first of all an important thing in itself, and, secondly, an inspiration by whose light people will again become creative. I am afraid that this is not the case. Why is a country like Italy covered with religious paintings, not only in churches, but in city halls, in towns and villages, in every hospital and institution? There was never any pretence of giving the people æsthetic enjoyment or of developing their appreciative powers, nor was there for one moment in the past any idea of providing archæological accuracy or historical truth. The people simply derived from those pictures an added interest in the life about them. If a crucifixion or some incident in the life of a saint was to be interpreted, the ordinary dress of the day was used; men and women whom the inhabitants of the town or village knew and saw every day of their lives, agricultural landscape, local houses, beasts, carts—all the things they used were portrayed, so that the great religious drama was set down in terms that everyone could understand. Instead of an attempt to appreciate the æsthetic qualities of a Madonna and Child you had an intimate and delightful element of

fell in quite willingly with this scheme of things, though it is true that he accepted the existing conventions. Incidentally, I should like at this point to combat the idea put forward again and again that the greatness of the artists of the past lay in their belief of the creeds and dogmas which they were called upon to illustrate. That, to me, is a heresy, for the artist is expressing something more real and more truthful to him than any creed or dogma—the intuition on which the human spirit stands and upon which all creeds and dogmas have been founded.

In examining the subject matter of works of art, one finds that the artist always manages to send out an S.O.S.—a signal to suffering humanity—no matter what the particular advertisement that he was called on to produce ; he was able, first of all, to put down in the most radiant and precise form the beauty of the face of the world and the human spirit, and thus, through his creative faculties, he was in sympathy, as every artist is, with human endeavour and human suffering.

In considering any period of the art of the world—Italian painting, for example—we find, first of all, less of what may be called “religious” painting than we are usually led to expect. In the Italian pictures there is more preoccupation with amazing and rather ghastly incidents in the lives of the saints than with Christian truths. Roughly three-fourths of the pictures, which conventionally are called religious, deal with the decapitation of young ladies and old gentlemen with beards, in which—if you like so to put it—the artist has a chance of satisfying his curiosity, his interest in the varied human types, in local landscape and life, rather than of displaying his knowledge of history. We look

take the art of Greece or Rome, Japan, India or Egypt, you will always find that the subject matter is common to the artist, the priest and the people. Throughout the history of Greek art surprisingly little invention was shown. Apollo, Venus, the fight between the centaurs, etc., were reinterpreted again and again; and we hear of no grumble on the part of the Italian artist, because he had to go on time after time with eternal Madonnas, for he accepted the imposition of limited subject matter. In consequence men had not to get used to a surprising new development every ten years. It does not appear to have entered the artist's head that he was less free to draw and paint as well as he could, and in consequence less at liberty to design nobly, to probe deeply into form, or to be less interested in the daily drama of life.

The revolution in art which has disturbed us came from the discovery of Greek learning. Alien subjects were now imposed on the artist, and although he used the same experience in their interpretation, none but the erudite few could understand.

We are never aware of what is going to be dangerous in our own time and what is going to lead to progress, so no one realised that a great revolution in the creative arts was then arising. But all our difficulties date from that time. Once you have the complete divorce between interest in the subject matter and what is set down you have naturally a new tendency to deal with—the æsthetic content of a work of art—and the critic, instead of talking to people about what really interests them—the subject matter—brings a new jargon into being, a merely æsthetic appreciation, a thing never known before.

interest as to why the artist had chosen Mrs. Smith, instead of Mrs. Jones, to sit for the Madonna, as Mrs. Jones was much the better looking. We find the same thing in the East. In the great Buddhist paintings the most sacred incidents in the life of the Buddha are depicted on a local background illustrating life as it was passed by princes and paupers in the India of that day. Thus was developed a natural respect not for art, but for human life—and in ordinary things an extraordinary beauty was shown to lie.

That, to me, is one of the most valuable lessons that we can learn from the past—the putting away from ourselves of the rather meretricious desire to have good taste and good judgment. Too many people now are interested in art so that they may show that they have appreciation, and some of them appear to think that to buy pictures of the past, even while they neglect creative people of the present, is a short cut to social prestige. But the study of the finest human thought does not so much enrich social qualities as it brings shame for a mean thought or action, and contact with a fine mind gives powerful support to our own more generous and courageous impulses.

The subject matter of great art is always a perfectly common one, and the true artist presents his subject to the spectator in forms of austere simplicity.

That issue has been obscured, and for this reason. Up to the time of the Renaissance the artist, always in the service of the State or the priests, had his subject matter prescribed for him, and he drew on his varied human experience to give to ordinary people that sense of the significance of the true values of life which has dignified the arts throughout the ages. Whether you

To say that only a little education is necessary because they are only going to know little in their lives seems to me to be a negation of what education should stand for.

But at any moment we may get a democracy which will realise that its finest minds can express in clear and perfectly simple statement what most people think about vaguely in an amateurish way. These people who stand aside from the market-place and pursue truth for no other purpose than the glory and struggle of the pursuit must be used to the full. A healthy democracy could do it.

I look forward to the day when all craftsmen shall be used once more as advertisers. Advertising is a form of human mesmerism, but we want to use it for the best instead of the meanest ends. It is shocking to travel in a country like England and look back on the past and see how the last democratic civilisations were able to make use of these servants of the community: to put them in every village, in every town, in every city, not in a museum, in which works of art are languishing in glass cases, dependent upon the visits of strangers to bring to them some kind of life. One would like the work of living people to enliven the streets and houses of town, city, and village.

We must get out of our heads the idea of appreciation, and get back to making things ourselves. We do not try to appreciate plumbing when we want water; we turn on the tap and get the water. We do not have to know all about dynamos and hydrostatics when we get into a railway carriage. And we need not know about æsthetics if we had artists who would do for us what the plumber and the railway engineer do—

We have to-day gone so far that we think that if a work of art has subject matter which is of interest to everybody or anybody it is a bad work of art. This is a most antisocial thing. It is true that the finest artists do pursue truth for its own sake, and are left standing aside because we do not know how to use them. We must find some way to reabsorb these finest advertisers of human thought into the social system, for a commercial civilisation which cannot absorb its finest spirits is doomed. I do not for a moment suggest that heads of industry to-day are any more worldly or any less truthful than the priests and kings of old, but somehow these earlier leaders succeeded in discovering the most dynamic powers then existing, and harnessing them to the service of Church and State. Democracy, whilst paying its homage to the arts, has never known how to use them.

You who are occupied in education have to find some means of preventing education from becoming narrow and without vision. There is a tendency in the Universities and schools to give a specialised education, so as to enable people to fulfil the limited demands of industry. And there is a tendency where young people are being educated in art to say: "This student is going to be a designer of cotton fabric; that man is going to design pots; surely he does not need a complete education which will make him dissatisfied with the limited work he must do."

That may be so. Psychological questions must be fought out in the great world, but our business is to see that the community produce educated men and women; and it is our business, while they are young, to put them in the way of pursuing truth for its own sake.

It always seems to me a paradox that while our social system enables the humblest to travel and see something of the world, yet we do our best to take everything worth looking at from every part of the world to shut it away in our museums. Is it so important that we appreciate an altar-piece that has been torn from the only place where it should be? It is just this element of pilgrimage which makes travel so delightful; yet our looting propensities make it as little worth while as possible.

Will our democracy ever be so democratic that the national galleries will hand back some at least of the treasures to the country and place of their origin, and refurnish a part of our own places with similar treasures freely restored to our own churches? I feel very strongly that those of you who do deal in past and present should think these things over, and pay a little more respect to the living needs of the nation; whether you pay less attention or more matters little. The admirable things that men have made and written and thought deserve our full homage, and every garment the human spirit has worn is worthy of our respect.

All we need is a knowledge of life, and the knowledge of life is really the key to the understanding of all poetry, of philosophy, of works of art.

It is not our appreciation of æsthetic qualities that matters: it is our knowledge of the human heart with which, after all, all religion, all poetry deals; and we must give the creative people of to-day a chance of setting down their own expression. In this struggle against that material power which we always find in the world they need all the encouragement they can get for a more fearless and gallant expression of the human spirit.

provide us with that reflection of life which is necessary to healthy civilisation.

We should spend a little less money on appreciation and think a little less about the past, and say to ourselves, "How many thousands have we spent on building and furnishing museums and picture-galleries, and how much have we spent upon enabling creative people to carry out their real functions?"

Suppose we had spent a little less on museums, and, to consider one short period of the past, had employed such men as Watts, Walter Crane, Burne-Jones, Whistler, Madox Brown, and Alfred Stevens to put up decorations throughout the country, do you not think that this would have made more music in England than the presence of all picture-galleries and museums?

I suggest that educationists should assist in looking to the past, not as a curiosity, but as an inspiration. The mere acquisition of information about works of the past is not knowledge, and I cannot call that man educated who thinks that he shows his taste by filling his house—largely on the advice of picture-dealers and experts—with a hotch-potch of China and Japan, Jacobean and Queen Anne, whilst he has not enough knowledge and pluck to pick out in his village or town carpenters, embroiderers, makers of silver and ordinary household things, and to co-operate with them and get for his own generation what the people of the past were able to produce for theirs. I look forward to the day when the man will be called a man of taste who has enough knowledge to do this, and to make for the use of his children and his household things which will bring out the jolliest and most attractive side of his most gifted neighbours.

XII

BRITAIN'S PLACE IN WESTERN CIVILISATION

By F. S. MARVIN, M.A.

(Sometime Senior Scholar of St. John's College, Oxford)

It is pointed out in the recently published report of the Board of Education on the teaching of history¹ that it will be found practically necessary, and indeed desirable on many grounds, to make the main thread of the history course turn on the development of our national being and civilisation, although we regard the history of civilisation as a whole as the proper subject of history. In view of this, it may be useful to attempt a short sketch of the evolution of Great Britain or England as a nation, and to attempt to point out the place which our own country has, after nearly two thousand years of historical progress, now achieved in the world. Such a sketch must start from and rest upon geographical conditions, for all history is conditioned by geography. But the main portion of the treatment must be history pure and simple, for it is the history of our country that has made her what she is. Out of these historical elements, based on geography, we see a certain national character produced, and we will conclude by indicating very briefly wherein the value of this character and the

¹ Educational Pamphlet No. 37.

Let us, then, ask: "Is this a fine interpretation of life?" Until we have the courage to challenge the content of a work of art by the light of our own experience, clearing our minds of æsthetic questions, we shall not appreciate the most vital art and stimulating things of our own or of any other time.

The following remarks were made in answer to questions.

I would suggest that you should study, say, Primitive Art. You have those admirable books published in France on the cave paintings; take savage art, negro art, and other forms—remarkable emanations which make us feel that our sense of values of the past may be wrong. Take Indian art—fate has bound us to India. We complain that Indians are too political, yet we have not made them less so by our slowness to recognise the fascination of their own culture. It is an irony of fate that we have been in close touch with India for a hundred years and have had to wait for the advent of the Japanese prints to understand what underlies the East and Eastern art.

If you get folios of reproductions first of all, and deal with them from the point of view of ordinary experience, and ask, "Is this a fine interpretation of that subject?" as a piece of mental gymnastics you may find it to be of value. If you can once get the fine spirit of challenge, you will find out some of the trivialities of the popular art of to-day. You will have a clear mind, and not ask yourself, "Am I going to be wrong?" We should never worry about right and wrong—we should only want to be ourselves. We know that education is sincerity, and right and wrong are indeed very difficult questions.

Roman times.¹ But as Mr. Collingwood points out, all through Roman times Britain had attained no nationhood, but was regarded both by its inhabitants and its rulers as a part of the Empire. The revolts against the Romans in Britain were either of a local or tribal kind, as the rising of the Iceni under Boadicea, or the later risings of candidates for the Empire, such as the revolt of Maximus. The nation only begins slowly to develop after the Anglo-Saxon invasion. Egbert was the first to realise for a time the idea of a united England at the time when Charlemagne was reuniting the fragments of the Roman Empire in the West. But Alfred is the first national hero, the first person to whom we look back as a founder and inspirer of England. His work, though immortal, was greater in the retrospect than in the actual fact. England does not yet attain her nationhood with him. She becomes under Canute a part of the Danish Empire, and under William the Conqueror part of the Norman Empire. The Norman Conquest with its uniquely remembered date is justly regarded as the most important of all the foreign invasions for the consolidation of the country. The lines of government it laid down were the most permanent. Its feudalism was of a new and stronger type, and yet at the same time the acceptance of William by the Saxon nobles at Berkhamstead, gave it the element of legality and self-government which has been typical of England ever since. It was also important as linking England more closely than before with the Roman See, which hallowed William's banners before he set sail.

The fourteenth century sees the emergence of England

¹ See R. G. Collingwood, *Roman Britain*, Oxford Manuals.

work our nation has done for the world seem chiefly to consist.

To begin, then, with geography. In historic times England is *of* Europe, but not *in* it. This gives the keynote of the subject we have to treat. In the earliest prehistoric times, down to the days of the Old Stone Men, our island was practically part of the Continent, and its culture cannot during those long ages be in any respect distinguished from the other inhabitants of the land mass to which it belonged. Britain and Britain's history begin when the waters first flowed through the Channel. After that differences naturally begin to appear, and the story which we have to trace resembles that common to the whole field of biological development. A primitive homogeneous mass is broken up and differentiated into self-centred units, which later on come together again in a new and larger unity. This is the law of all life, and our own national history is a peculiarly interesting and varied example of it. Our island, which appeared before Neolithic times, gives the material foundation for the sociological development. It was separated from the mainland, but being so near and in full sight of its more numerous neighbours, was never isolated from them. The island breeds seamen, and being within easy reach of the Continent, offered at all times an attractive object for incursion and conquest. From the successive streams of invaders many continually settled down, became incorporated in the land of their adoption, and added various elements of strength to our national being.

The first stage in the formation of a distinct island type of civilisation has lately been traced by writers who have studied the remains of Celtic Britain, especially in

national character and work, which later centuries have brought to fuller fruition.

To look in the first place at Domestic Government, we see first under Elizabeth, and later, of course, much more strongly under her successors, the growing determination of Parliament to make its will felt over that of the Sovereign. As the schoolboy said in his examination paper: "The House of Commons often urged Queen Elizabeth to marry, a thing they would never have dreamt of saying to her father"; and they urged many other things beside, as in the fight over monopolies, which she, with her Tudor good sense and sympathy with the nation, knew how to grant without abating her personal dominance. From this time forward we may in fact clearly trace the instinct and the habit of our people to govern themselves, as an admitted right, gradually embodied in all the institutions and laws of the country. The fight in the seventeenth century under the Stuarts is really the successful defence and development of the national liberties, against the reaction of a doctrinaire and unsympathetic reigning family. The same self-governing instinct and tradition were in the same reign of Queen Elizabeth transplanted to the new colony of Virginia, which offers the first example of a free Parliament established outside Europe.

The age of Elizabeth also shows for the first time by its practical achievement the destiny of our island people to become a world power, and ultimately the nucleus of a world Confederation. Virginia in the West, the India Company in the East, both established in her reign, are the two first great arms thrown out over the world, and in each case we can trace quite clearly the

as a nation, and she owes the clear distinction of her nationhood at this period to several causes, some wholly good, some largely mingled with evil and disaster. Edward the First, the most powerful builder of the English State, gives us the Parliamentary system in a complete outline, the spread of an English judicial system, the use of English as a language. He sees the need of union with the Western and Northern parts of the island, and nearly completes their conquest. The Hundred Years' War carries out the inevitable break with France, and becomes the heroic legend of English patriotism down nearly to our own time. It is there that Shakespeare can first find something to reflect the developed patriotism of Elizabethan days. At the end of the century, Chaucer first gives permanent literary vitality to the English language.

The fifteenth century sees the English finally driven out of the Continent, and prepares the way for the new rôle of England as the independent power holding the balance between the protagonists of Europe, which was developed in the sixteenth century by Wolsey and Queen Elizabeth, and dominated the minds of English Statesmen down to the advent of the League of Nations.

The importance of the Elizabethan age arises therefore not only from the brilliance of the figures which adorned it, and the greatness of the work which they accomplished, but even more from the fact that in that age we see for the first time all the features of England as a nation, first completely outlined. Here then in the sixteenth and seventeenth centuries the student of English history will always love to pause. At this point we may disengage the following elements in our

strong sympathy, if not the actual suggestion, of the "Grand Design" of Henry the Fourth of France, which Sully reports in his *Memoirs*. This was the first of the many schemes for a League of Nations that were about to arise among the well-wishers for the peace of the world, when the ideal unity of the Catholic Church had finally broken down. If we consider the doctrine of the balance of power in conjunction with the ideal of a world Federation, it is clear that the first is only a stage, yet a necessary one, to the second. The dominance of any one partner in a general union must be checked before the rights of all the others can be realised. Here, again, our practical instinct and common sense have served us better than the more complete idealism of some other highly gifted nations.

When we turn to the world of Science and Philosophy, the same British quality of practical common sense seems to predominate, though naturally the distinction is not so marked as in the spheres of action. Bacon, another Elizabethan figure, stands here as the English type compared with Descartes, the ideal abstract thinker. Our national tendency in this respect has entailed a certain deficiency of philosophers; France, Germany, and Italy have more. Our one great "synthetic" thinker, Herbert Spencer, can hardly be regarded as an exception to the rule. We have always looked in Philosophies as in Policies for things that would work rather than for apparently perfect systems. Harmony with external facts, rather than complete logical coherence, is the note of British thinking. In the same way our men of Science from the Elizabethan Gilbert to the Victorian Faraday have been much more closely in touch with the men of action—

historic event as arising from our geographical position and our national training and character. At that time, more truly perhaps than at any other, we were a nation of seamen : we won then, by defeating the Spaniards, the first position in the world on sea. There ran in the veins of those Elizabethan seamen a passion for freedom, combined with a determination "to make good" in whatever part of the world they decided to settle. It was not only the desire to trade and make money, as Napoleon accused us in his famous phrase : that was included, no doubt, and was often the primary motive ; but, including and enlarging that, was the determination to make a good job of anything that was taken up. This is the practical aptitude which we may fairly claim for ourselves in a large measure, though on the side of complete and systematic thinking we must yield the palm to others.

The same age of Queen Elizabeth exhibits, for the first time fully realised, the policy of the balance of power in foreign affairs, which it has been the fashion lately unduly to disparage. It was, as we shall see, an incomplete but not a perverted ideal. It arose from the necessity of an Island Kingdom which was *of* Europe but not *in* it, to preserve its national being and independence amid the strife of Continental neighbours, who were at the time apparently much stronger than ourselves. We could thrive, if we could prevent any one of these great opponents from overwhelming the rest and dominating the world. The instinct of self-preservation, therefore, which was the primary motive, brought in its train the wider notion of a harmony of possible enemies instead of the empire of one. To Elizabeth, therefore, is attributed by some accounts a

further the ideal of the Grand Design of Elizabeth and Henry the Fourth. William the Third was too self-centred, too much absorbed in the desperate struggle of his life, to project his thoughts into the larger possibilities of the future.

The eighteenth century, which for this purpose must be taken to extend rather from 1714 to 1815, was decisive for us in three respects. In the first place it witnessed the defeat of our most serious rival in world settlement—namely, France—from whom we wrested finally the leading place both in North America and India. The Seven Years' War, completed by the struggle with Napoleon, settled this debate for all time, and Sir John Seeley in the *Expansion of England* treats it as the leading *motif* in the whole century. Important as the conflict was, it must, however, be regarded as secondary to two other movements which also took a decisive turn in the same century. These were the independence of the United States and the triumph of the industrial revolution.

In the first case our American Colonists, who were rightly vindicating for themselves a free and independent development in the New World, gave us at the same time the indispensable lesson which we needed for the future development of our own Commonwealth. Legally our position in that conflict was unassailable; practically the better course prevailed. A freer and wider system was needed than that which George the Third and his advisers struggled so long and painfully to maintain. We learnt from our defeat in 1783 to approach the problem in all other cases in a different spirit, and the date becomes therefore a second birthday for the British Commonwealth.

the sailor, the inventor, the engineer—than the scientists of other countries.

It would be interesting to carry out the same line of comparison in literature, art, and religion, but enough has been said to mark the quality of British work in those spheres which are easiest to compare, and in all it will be seen that the Elizabethan age is of the first importance, for there you find all the branches of our national life beginning to flower in abundance and strong individuality.

The seventeenth century completed the triumph of the constitutional idea in home government. The men of that age fought out on the battlefield the problems that had been raised in the Courts and the Council Chamber. They finally defeated the absolutist pretensions which had been put forward by the Stuarts and their advisers. They secured, in spite of the temporary reaction of the Restoration, the freedom and national self-government on which the revolutionary settlement of 1689 set its seal. On these lines we have advanced steadily ever since, and through the work then done have avoided the convulsions that have afflicted so many other nations in the last century and a half.

In the world at large we strengthened ourselves in the seventeenth century, taking the definite lead of the Dutch, as we had of the Spaniards in the century before. We enlarged our settlements steadily East and West, and under the lead of Dutch William we continued our policy of striking down the rising tyrant, in this case Louis the Fourteenth, who plays again the part of Philip the Second in the sixteenth century, but it cannot be said that any notable step was taken before the end of the eighteenth century to carry

goal to be aimed at, or the right steps to reach it; above all, England, though proud of her strength and national character, did not realise the part she would be called upon to play before the end was reached. Our wealth, our population, and our Empire grew apace, and we were too much absorbed in attention to these and in satisfaction with our own security, to see that we could not thus stand alone, and that it would become our duty and our privilege to cast a decisive vote in the great world settlement which was at hand.

Complaints were frequent, just before the outbreak of the Franco-Prussian War in 1870, that owing to this freedom of mind England had lost her weight and her prestige in the Councils of Europe. Such was the tenor of Lord Clarendon's complaint to Mr. Gladstone when, as our Foreign Minister in the anxious years preceding that disastrous war, he foresaw the troubles that were to follow. Disraeli's comment from another point of view deserves to be recorded. He saw that our Imperial expansion and responsibility were the source both of hidden strength and of obvious peril. We stand apart from Europe, he said, not because we are weak, but because we are so great, and feel the risk of imperilling our greatness. Such a position could not last; the equilibrium was not stable, and the solution was reached, on the one hand by extending our national system of self-government so that gradually all the outlying parts of our Empire became autonomous as well as loyal, and on the other hand by gradually allowing ourselves to take more and more part in the settlement of Europe, until in the Great War we became the decisive factor. When the blow came to be struck, our Empire was already a Commonwealth,

In the other case, the industrial revolution, England reaps the due reward for her persistent combination of theory and practice to which we alluded above. The steam-engine, which is the symbol as well as the chief agent of the industrial change, was due to the close collaboration of the men of science and the inventor, in this case of William Black and James Watt. To the work that they did and the kindred work of Hargreaves, Arkwright, and a host of pioneers in the eighteenth century was due the fact that England outdistanced the whole world for a century, and was able to defeat the hosts of Napoleon with the products of her looms and the output of her mines. Here nature does her part. The abundance of coal and iron and their happy collocation made the work possible; but to the scheming, practical, and collaborating mind the final triumph is due. The wealth, the possibilities, the evils of this development are the legacy to the next century, and determine the lines of our national history from 1815 to 1914.

This period—that is, the last century of our history—is attracting at the present time more and more attention. It is the age in which England and the rest of the world have been working out the problems set for them by all the decisive happenings of their previous history. It is the age of economic, social and democratic development, the age of rapidly increasing wealth and population, the age of consolidating nationalities, the age, finally, of a conscious attempt to organise a state of world-unity and peaceful progress. In England the progress was largely unconscious. Men did not foresee either the gravity of the dangers through which our civilisation had to pass, nor grasp intelligently the

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government, justice, and peaceful neighbourhood, which had been found in practice to serve the best interest of all the Anglo-Saxon and English-speaking communities in the world. The United States, which from this point of view was the most powerful offshoot of our own body, gave in the end the clinching argument in the great dispute, for they finished, though they could not be said to have won, the War, and they unquestionably determined the establishment of the League of Nations as the first section and the foundation of the whole Treaty of Versailles.

It is clear, therefore, that, reviewing historically the growth of Great Britain and her place in Western civilisation, we can and ought to maintain, without national arrogance, that the principles on which our own country and her sister nations have risen to peaceful power are those on which the world community, which has just been founded in the League of Nations, must proceed, if the same security, political freedom, and peaceful alliance are to be maintained. To look upon our own history and our own possible services to the world in this light is not to ignore either our own frequent lapses and blindness, nor what we have to learn from the greater depth and intellectual thoroughness of others. But it should implant in ourselves and those we have to teach a consciousness of the high value of the achievement among ourselves of stability and co-operation; above all, the lesson that national prosperity is, in the long run, impossible for any community, if it does not realise that its own prosperity depends upon the welfare of all, and that the welfare of all must be for this very reason the end and limit of every separate national Government.

consisting of independent nations, united only by links of fellow-feeling, by loyalty to a common Crown, and by a common determination to see the principles of justice and self-government, by which we had thriven, applied generally to similar communities through the world. Canada was the first to attain her nationhood. After Lord Durham's report, a responsible Government was granted there in 1847, to be completed later by the Dominion Act. Australia and New Zealand followed suit, Australia obtaining union in a Commonwealth in 1909. After the second Boer War, the Union of South Africa was established in 1909. Ireland, Egypt, India have followed through varying stages, and all these countries, just in so far as they become self-governing, increase the influence of the British Commonwealth in promoting world peace through the League of Nations.

The other line of recent British development is the direct sequel of the Franco-Prussian War. France, mutilated and continually threatened by her victorious neighbour, sought for Allies. The first and most obvious was the Empire of Russia, the great and growing neighbour of Germany to the East. Germany, between the two and under the leadership of the ablest of modern Statesmen, became more and more powerful and threatening. The world was again divided, as it had been in the sixteenth century between France and Spain, or in the eighteenth between France and Austria. Again England seemed called upon to impose her old policy of the balance of power. But this time the whole world was set as the stage on which the drama had to be played out, and its conclusion involved the application to the whole world of the principles of self-

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